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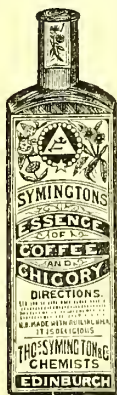
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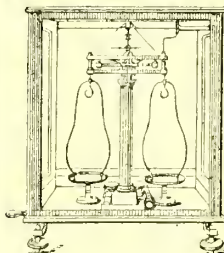
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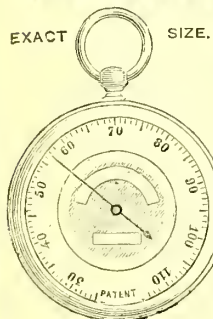
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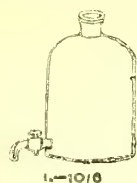
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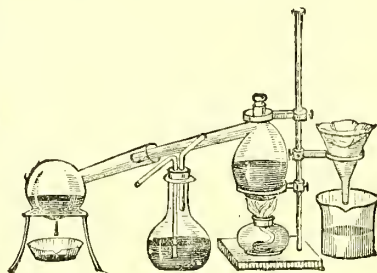
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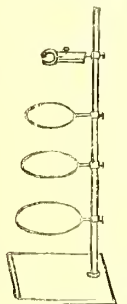
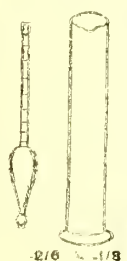
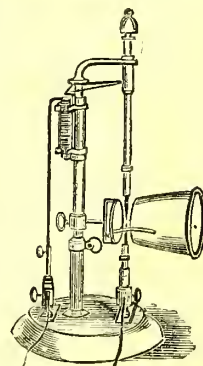
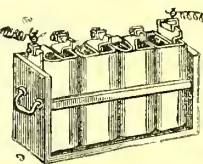
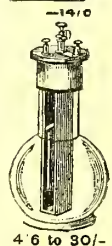
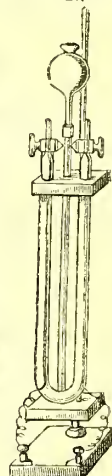
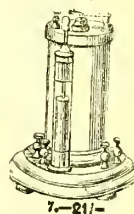
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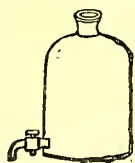
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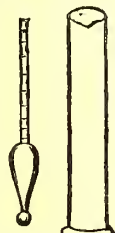
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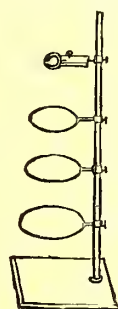
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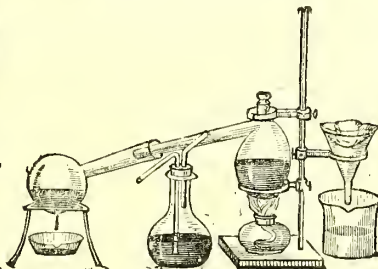
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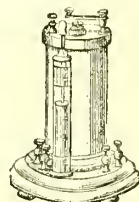
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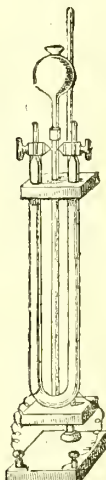
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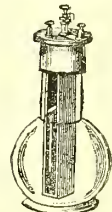
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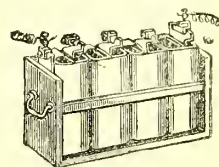
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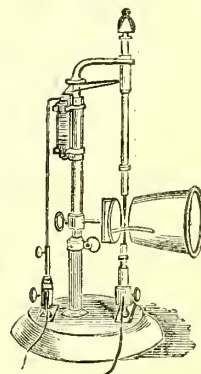
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THE CHEMISTS' TWENTIETH ANNUAL BALL, AT WILLIS'S ROOMS, KING STREET, ST. JAMES'S, ON WEDNESDAY, JANUARY 27TH, 1886.

STEWARDS:

(With power to add to their number)

JOHN ALDEN
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ALFRED ATTWOOD
G. R. BARCLAY
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WM. BAXTER
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"That with a view to further secure the comfort of those present at the Ball, and to avoid the possibility of overcrowding, the number of Tickets be strictly limited to 350, and that all applications for Tickets must be accompanied by a remittance."

TICKETS: LADY'S, 12s. 6d.; GENTLEMAN'S, 17s. 6d.—including Refreshments, Supper, and Wine.

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*Comely dames, brave squires, pretty little misses
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"THE PERFECTION OF NURSERY POWDERS."

"THE SANITARY ROSE POWDER"

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A SOLUBLE Antiseptic Dusting Powder for TOILET and CHILDREN'S USE.

AN ELEGANT SUBSTITUTE FOR VIOLET POWDER, FULLERS' EARTH, ETC., ETC

RECOMMENDED BY EMINENT MEDICAL AUTHORITIES.

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Proprietors: JAMES WOOLLEY, SONS & CO.,

Manufacturing Pharmaceutical Chemists, MANCHESTER.

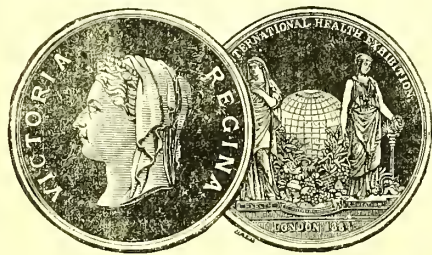
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"POLVOS DE ROSA SANITARIOS,"

"THE SANITARY ROSE POWDER"

MARCA DE FABRICA REGISTRADA.



Polvos solubles y antisépticos para el tocador y para los niños.

RECOMENDADOS POR EMINENTES DE LA FACULTAD DE MEDICINA.

Muy útiles para irritaciones de la piel, y para obviar los sudores. A propósito para las personas y niños con la piel mas delicada, y para uso de las Señoras son muy superiores a los polvos ordinarios de arroz.

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Have been known for the last 84 years all over the world, and being well advertised, and always finding a ready sale, are well worthy the attention of Chemists, Druggists, and Storekeepers. They will keep good for years, no matter how hot or cold the climate may be.

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Preserves, strengthens, and beautifies the hair; it contains no lead or mineral ingredients, and can now be also had in a golden colour, which is especially suited for fair or golden-haired children and persons. Four sizes.

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Is a most cooling, healing, and refreshing wash for the face, hands and arms, and is perfectly free from any mineral or metallic admixtures; it disperses freckles, tan, prickly-heat, redness, pimples, &c.

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Or PEARL DENTIFRICE, whitens the Teeth, prevents and arrests Decay, strengthens the gums, and gives a pleasing fragrance to the breath.

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Is a beautifully pure, delicate, and fragrant toilet powder, and has lately been much improved. Each box has inside the lid a certificate of purity from Dr. Redwood, Ph.D.; F.C.S., &c. Sold in three tints—white, rose, and cream.

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Produces immediately a perfect change in red or grey air, whiskers and eyebrows, to a glossy and permanent brown or black, which colour neither washing nor perspiration will remove.

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COUNTER BILLS, SHOW CARDS, &c., CAN ALWAYS BE HAD ON APPLICATION.

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STURROCK'S OLEAQUA, OR HAIR WASH AND OIL IN ONE! Removes scurf, stimulates and strengthens the roots, and imparts a smooth, glossy, and sufficiently moist appearance to the hair without actually greasing it, quite superseding the use of the ordinary Pomades, Oils, or Hair Washes, and particularly suitable for warm climates.

NOTE.—The celebrity obtained by this having caused several spurious imitations, it is necessary to observe that the original and only genuine is "STURROCK'S OLEAQUA."

STURROCK'S COMAURINE, OR GOLDEN-AUBURN HAIR LIQUID. A safe, certain, and satisfactory preparation for producing this fashionable colour of hair, retaining at same time its natural softness and beauty. 5/ and 10/ each bottle.

Price 3/6, 5/-, 7/6, 10/-, 21/-

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STURROCK & SONS,

Perfumers to Her Majesty the Queen, H.R.H. the Prince of Wales,

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And may also be obtained through any of the Wholesale Drug & Perfumery Houses.

A PERFECT BOON TO MOTHERS!**ROGERS'****"NURSERY"****HAIR
LOTION.**

One application is guaranteed to destroy all Nits and Parasites in Children's Heads, and immediately allay the Itching and Irritation. It is now used in Thousands of Families with the greatest success, and all who have tried it are delighted with the effect, and declare it to be worth A GUINNEA A BOTTLE.

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CHEMIST,

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Sold in large Bottles, price ONE SHILLING. Sample Bottle, 7d.

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Observe! Genuine only in Yellow Wrapper, White Label.
WHOLESALE AGENTS.—Barclay & Son; Edwards & Son; Maw, Son & Thompson; Millard & Son; Sanger & Sons; Thompson & Co., Limited; Butler & Crisp; Hovenden & Sons; Newbery & Sons.

This Unique Preparation has the extraordinary property of keeping the

HAIR IN CURL.

Now used by Ladies in all parts of the World.

Needs but an introduction to command a ready and constant sale.

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Supplied by all London Pat. Medicine Houses. Handsome Show-cards, Glass Tablets, and Circulars profusely supplied.

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For the instant removal of Superfluous Hair. Sold by all Chemists, 1/- and 2/- per box.

JAMES'S HERBAL POMADE,

For Promoting the Growth of the Hair, Whiskers, Beard, Moustachios, Eyebrows, and Eyelashes. Sold by all Chemists, 1/- and 2/- per box.

These Articles are well worthy the attention of Chemists, Wholesale Houses, and others, as they are being well advertised.

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Warranted to remain Fluid in all Climates.

Prepared only by J. CHRISTIAN, Sole Proprietor

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SPECIAL LINE.

The above, complete in handsome Box, containing large Glass Stopped Bottle Marking Ink, large Improved Stretcher, and two Hand-cut quill Pens.
Retail Price, 1s. 6d.

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THREE QUARTERS OF
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REGISTERED TRADE MARK.



AN OAK TREE.

Can be used with or
without the applica-
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The above, complete in handsome Box, containing large Glass Stopped Bottle Marking Ink, Improved Stretcher, and one of Scofield's Crystal Marking Pens for marking the most difficult Fabrics.
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The most Reliable Marking Ink for Linen,
Cotton, or the finest Fabrics.EACH BOTTLE WELL FILLED AND SECURELY CORKED
FOR EXPORT.**IMPORTANT CAUTION to Colonial Importers and the Trade in General.**

BEWARE of SPURIOUS and FRAUDULENT IMITATIONS, and in ordering write for CHRISTIAN BOND'S "OAK TREE" MARKING INK. The GENUINE H. BOND'S MARKING INK bears the above Trade Mark, an "Oak Tree," and the name of CHRISTIAN on each Wrapper and Box.

Put up in all convenient forms for Export and Counter Trade. 6d. and 1s. size, on Cards, and in Boxes containing 1 dozen bottles; also in 1s. 6d., 2s. 6d., and 5s. bottles. For Trade Prices apply to the Wholesale Houses, or direct to the Proprietor, Illustrated Catalogues and Price Lists on application. Special Quotations to Shippers.

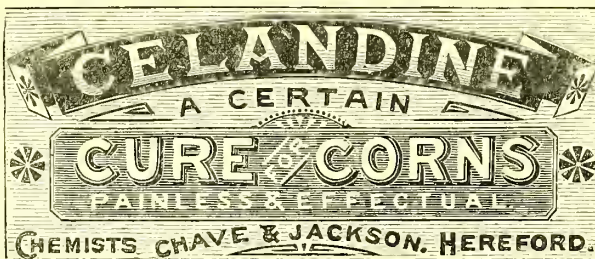
NOTE the PRESENT and ONLY Address,**J. CHRISTIAN, 46 City Road, near Finsbury Square, LONDON, E.C.****NOTICE—Something Special to follow in next Advertisement.****IT WILL PAY YOU**to take this Agency, because you can sell ten
times more CELANDINE than any other
"CORN CURE," without trouble or expense.

See opinions of 500 Chemists who have proved it

CELANDINE is the best and most saleable article in the Market.

**WRITE FOR
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Trade Mark, 31648.



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Retail at 1/ and 2/6.

CELANDINE is attractively Wrapped in Colours. Well Advertised. Known all over the World. In greater demand than any other remedy for Corns. Acknowledges no equal or imitation. Gains recommendation of all buyers.

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AN ARTISTIC SHOW CARD IN EIGHT COLOURS.

Mr. DAVID GILMOUR, Chemist, Dunfermline, writes:—"It is just a year since I sent the first order for a modest 3 dozen Celandine. Have now sold over 900 bottles, and gained the recommendation of many customers. Its imitations are one by one falling away."

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Lozenges, Mineral Waters, Perfumery, Druggists' Sundries,
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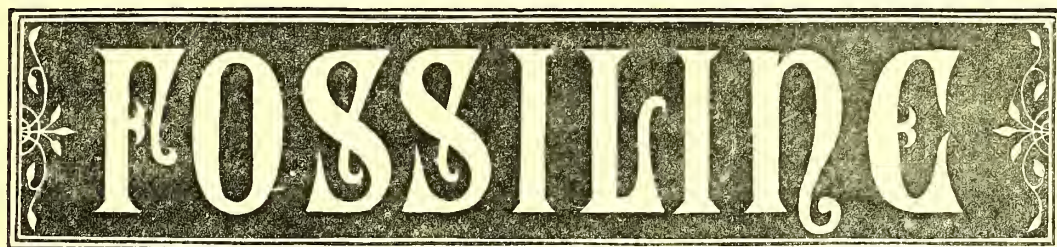
Coate's Brushes

Ossidine

Conor's Gluten Preparations

Chocolat Rousseau, etc., etc.

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(REGISTERED TRADE MARK.)

We beg to call the attention of the trade to our HYDROCARBON JELLY, manufactured only by us, and the demand for which being so largely on the increase is in itself an evidence of its superior quality. Owing to the much larger scale on which we are now enabled to manufacture this article, we can quote a considerable reduction in price—as under; thus rendering it as cheap as any other basis for Ointments, Pomades, &c., to which it is much superior, as it CANNOT BECOME RANCID. It is also in itself a simple dressing for wounds, bruises, &c., &c.

WHITE FOSSILINE.—In 1, 7, 14, and 28 lb. Tins, 1/-; 56 and 112 lb. Drums, -/11.

YELLOW FOSSILINE.—In 1, 7, 14, and 28 lb. Tins, -/8; 56 and 112 lb. Drums, -/7.

N.B.—Both answer tests of Parrafinum Molle B. Ph. 1885.

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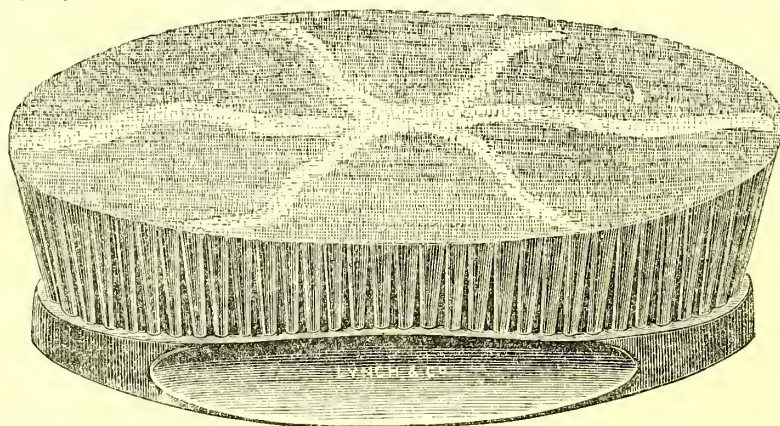
PRIZE MEDAL,



SYDNEY, 1879.

FLESH BRUSH

The use of this Brush after the Bath will be found invaluable in restoring the circulation and invigorating the system. The Electro Magnetic current conveyed by the friction necessarily employed will be found to stimulate the action of the skin and organs of respiration; and those who have once used it and experienced its beneficial effects have expressed their conviction that it is superior to anything they have hitherto tried.



RETAIL PRICE, 5s. EACH.

Trade Price, 36s. per doz., less usual discount.

A Small Compass accompanies each Brush, so that the presence of the Electric Current can easily be tested by passing the Brush around it.

Sole Manufacturers—

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RIMMEL'S PERFUMERY AND TOILET SOAPS.

PRINCIPAL SPECIALITIES FOR EXPORTATION.

N.B.—The Illustrations below represent the Articles in the proportion of about one-fourth of their natural size.

LONDON ARTICLES.

TOILET POWDERS.

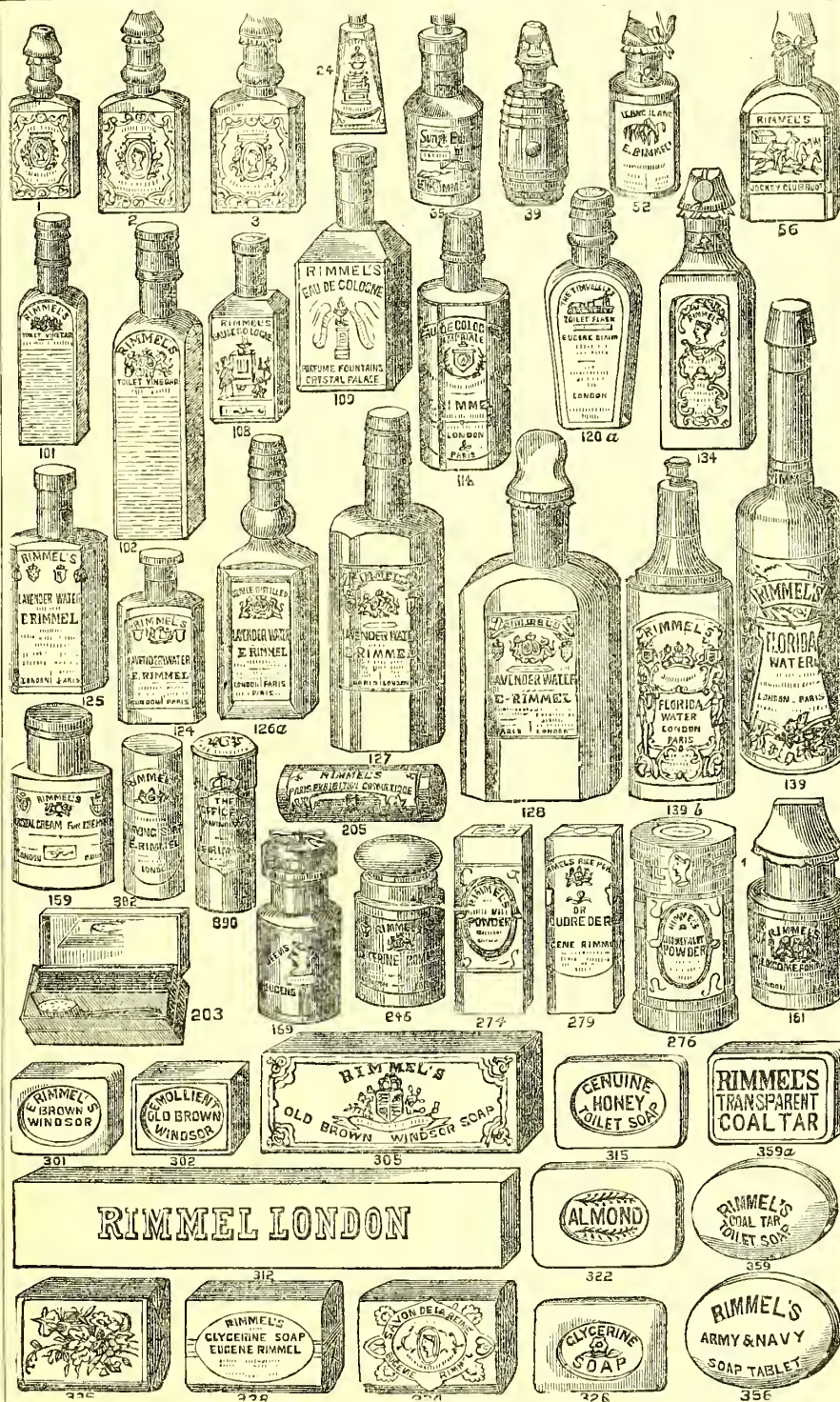
No. 274.	Violet Powder, tinfoil pack	2/6 doz.
" 276.	Do. do. barrels	4/0 "
" 284.	Violet-scented Oatmeal do.	4/0 "
" 279.	Rice Powder Packets	4/0 "

TOILET SOAPS.

No. 301.	Brown Windsor, 7-lb. box	4/1
" 305.	Do. do. packets	5/0 doz.

FOR THE HAIR.

No. 159.	Phileome or Marrow Oil	4/0 doz.
" 161.	Do. do.	8/0 "
" 162.	Do. do.	12/0 "
" 169.	Queen's Pomade	8/0 "
" 175.	Jamaica Pomatum	4/0 "
" 192.	Lime Juice and Glycerine	12/0 "
" 203.	Cosmetic, with brush	12/0 "
" 246.	Glycerine Pomade	8/0 "



PERFUMES, SECOND QUALITY.

No. 1.	Assorted Essences	2/9 doz.
" 2.	Do. do.	4/0 "
" 3.	Do. do.	6/0 "
" 4.	Do. do.	12/0 "
" 5.	Do. do.	12/0 "
" 21.	Perfumed Fountain	3/6 "
" 31.	Essences, cut bottles	12/0 "
" 38.	Essences with Sprinklers	7/0 "
" 39.	Stoppered Barrels	7/0 "

PERFUMES, FIRST QUALITY.

No. 51.	Extracts and Bouquets	6/0 doz.
" 52.	Do. do.	14/0 "
" 53.	Do. do.	5/0 "
" 54.	Do. do.	24/0 "
" 56.	Do. flat bottles	18/0 "
" 57.	Do. square cut bottles	21/0 "
" 62.	Do. round	36/0 "
" 66.	Concentrated Essences	21/0 "

TOILET WATERS.

No. 101.	Toilet Vinegar	6/0 doz.
" 102.	Do. do.	12/0 "
" 103.	Do. do.	12/0 "
" 108.	Eau de Cologne	21/0 "
" 109.	Do. do.	6/0 "
" 110.	Do. do.	12/0 "
" 114.	Imperial or Sanitary Cologne	10/0 "
" 120A.	Traveler's Flasks, Assorted	7/0 "

TOILET WATERS.

No. 124.	Lavender Water	3/6 doz.
" 125.	Do. do.	6/0 "
" 126.	Do. do.	8/0 "
" 127.	(or 128A.)	12/0 "
" 128.	Do. do.	12/0 "
" 129.	Florida	24/0 "
" 139B.	Sprinklers	12/0 "
" 139C.	Do. do.	8/0 "

N.B.—Bottled Articles supplied in cases of £10 and upwards. Special sizes not liable to duty, prepared for India. List on application.

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THE CROWN PERFUME RYCO.



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Wholesale and Export Perfumers, Manufacturers of
Best English Transparent and Fine Toilet Soaps.

SEVEN PRIZE MEDALS AWARDED.

CONCENTRATED PERFUMES, of great fragrance and strength.
TANGLEWOOD, WHITE ROSE, CROWN BOUQUET, } 16/, 20/, 28/, 48/
OPOPONAX, MATHIOLA, WHITE HELIOTROPE, } and 84/ per doz.

THE CROWN SOAPS, finest quality, richly scented, 84/ per cwt.

BEST OLD ENGLISH TRANSPARENT SOAP, unscented, 36/ per gross.
" " " " " highly perfumed, 72/ per gross.

OPALINE SKIN SOAP, for the Complexion, 48/ per gross.

INVIGORATING LAVENDER SALTS, Registered.—The new and popular smelling salts, 16/ per dozen.

OPALINE TOOTH PASTE, 7/ and 10/6 per dozen.

OPALINE FACE POWDER, 3/6, 7/, and 15/ per dozen.

EXTRACT OF LIMES AND GLYCERINE, for the Hair, 8/ and 15/ per dozen.

THE CROWN BRILLIANTINE, delicately scented, 8/, 12/, and 20/ per dozen.

SAPONINA—The Perfect Dentifrice, 8/ and 12/ per dozen.

SIR ERASMUS WILSON'S HAIR WASH, the Best Restorer, 18/ and 30/ per dozen.

Orders may be forwarded through any English Merchant or Drug House.

PRICE LIST ON APPLICATION TO THE MANUFACTORY—

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A REAL SKIN BEAUTIFIER!!!

MOUSON'S COCOA BUTTER SOAP

(SAVON AU BEURRE DE CACAO)

NO ROSIN USED & THEREFORE NO STICKY & SHRIVELLED HANDS!
NO EXCESS OF ALKALI & THEREFORE NO RED & ROUGH COMPLEXION!
NO INFERIOR OIL OR FAT & THEREFORE NO RANCID SMELL AFTER WASHING!

MOUSON & CO. Toilet Soap Manufacturers & Perfumers.
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To be had of all the principal perfumers, chemists & druggists throughout the world.

LARD GUARANTEED PURE

ORIGINAL AND BEST BASIS FOR OINTMENTS, &c.

CLARIFIED LARD, 11d. per lb. (10d. by 28 lbs.), 84/ per cwt.

BENZOATED DO., 1/ per lb. (11d. by 28 lbs.), 94/ per cwt.

Mutton, Beef, Veal, and Deer Suet and Beef Marrow,

Clarified Trotter and Neats' Foot Oil, 1/6 lb., 12/ gall.

Every variety of **TOILET SOAP** from 56/ to 224/ per cwt.

SPECIALTIES—

FRAGRANT GLYCERINE, MUSK, PINE, AND SANDAL WOOD SOAPS.

VIOLET POWDER, COSMETIQUES, POMADES, &c.

EWEN'S Clarified Fat Works
AND
Toilet Soap Factory,
5 HATFIELD STREET, LONDON, S.E.

HOUBIGANT,

Perfumer to H.M. the Queen of England,
19 RUE DU FAUBOURG ST. HONORÉ,
PARIS.

Manufactory of the Finest Perfumery.

Toilet Waters, Eau de Cologne, Essences
for the Handkerchief, Toilet Soaps, Rice
Powders, Cosmetics.

PRICES CURRENT AND CATALOGUES ON DEMAND.

OSBORNE, BAUER & CHEESEMAN,

Perfumers to the Queen,



PARTNERS—

H. BAUER, E. CHEESEMAN, J. HOLDSWORTH,

19 GOLDEN SQUARE, REGENT ST., LONDON, W.

MANUFACTURERS OF THE

BEST PERFUMERY

IN ALL ITS BRANCHES, AND OF
PURE REFINED SOAPS, ETC., ETC.

NOTICE to the TRADE.—Introduction of NEW 1/- SERIES of PERFUMES.

*Y^e Olde London
Sweete & Centes*



*"Goode Scentes doe purify ye brain,
Awake ye fancie, and ye witts refine."*

SIR JOHN DAVIES, 1559.

The "get-up" of these perfumes is unique. There are six specially-designed Labels with Views of Olde London, printed in subdued colours, and the Scentes are boxed in half dozens, and superior Boxes of 3 Bottles, suitable for presents.

The names of Scentes are—

Y^e Maye Garlande.

Y^e Wilde Flowers.

Y^e Red Rose.

Y^e Posie.

Y^e Woodbine.

Y^e Sweete Violet.

Y^e Sweete Pea.

Y^e Clove Pinke.

Y^e Gilleflower.

Y^e Sweete-brier.

Y^e Mignonette.

Y^e Newe Moxone Haye.

A NEW ARTICLE.

"CRISTIN'S RUBY LIP BALM"

(REGISTERED),

For Softening, Preventing Cracks and Roughness, and giving a RUBY COLOUR to the LIPS.

A NEW TOILET PREPARATION,

For Ladies and Gentlemen.

SUPERSEDING OLD-FASHIONED LIP SALVES.

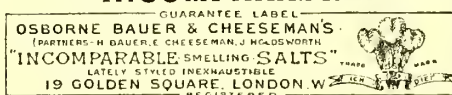
In METALLIC TUBES, 6d. & 1s.

IMPORTANT ANNOUNCEMENT.

"THE INEXHAUSTIBLE SMELLING SALTS."

To protect the Trade and Public from the various common imitations of their celebrated Smelling Salts as supplied to the Queen, OSBORNE, BAUER & CHEESEMAN now place over the Stopper of each Bottle the following distinctive guarantee Label, printed in Red, and will henceforth style their Salts

"INCOMPARABLE."



The above Goods are obtainable through all of the Wholesale Houses. Catalogue sent free on application.

Notice to the Trade

GENUINE EAU DE COLOGNE

MANUFACTURED BY

JOHANN MARIA FARINA,
JULICH'S PLATZ No. 4,

A DESCENDANT FROM THE

Original Manufacturer of this Valuable Perfume,
IS KNOWN THROUGHOUT THE WORLD AS

No. 4.

AND SOLD BY ALL THE LEADING WHOLESALE HOUSES.

In 2 oz. Bottles.

In 4 oz. Bottles.

In 6 oz. Bottles.

In 8 oz. Bottles.

In reputed $\frac{1}{2}$ -Pint, Wickered.

In reputed Pint, Wickered.

In reputed Quart, Wickered.

In 4 oz. Bottles, Wickered.

JOHANN MARIA FARINA,
JULICH'S PLATZ No. 4,
COLOGNE-ON-THE-RHINE.

By Special Appointment to the Prince of Wales and to several Imperial and Royal Courts

Possessor of PRIZE MEDALS and DIPLOMAS of the Exhibitions at LONDON, 1851; NEW YORK, 1853;
LONDON, 1862; OPORTO, 1865; CORDOVA (Argentine Republic), 1871; and at VIENNA, 1873; SANTIAGO (Chili), 1875;
PHILADELPHIA, 1876; CAPE TOWN (South Africa), 1877 (Gold Medal); SYDNEY, 1879; and MELBOURNE, 1880.

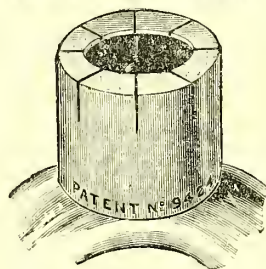
Sole WHOLESALE Agents for the United Kingdom and Colonies,

FICKUS, COURTENAY & CO.

ST. DUNSTAN'S BUILDINGS, GREAT TOWER STREET, LONDON.

BREIDENBACH'S PATENT LOCK STOPPER.

INEXHAUSTIBLE SMELLING SALTS.



By this means the stopper is never released from the bottle except when required; it is then simply withdrawn in the ordinary manner and replaced without the slightest difficulty. The object of this invention is to retain the PUNGENCY and STRENGTH of the Salts for a much longer period than in the ordinary bottle.

PRICES.

Watch Shape, Plated Silver Mounts.

Nos.	Retail	Wholesale, per doz.
845	1/6	12/-
848	2/6	20/-

Watch Shape, Solid Silver Mounts.

Nos.	Retail	Wholesale, per doz.
840	3/6	28/-
841	5/6	44/-
842	7/6	60/-

SUBJECT TO USUAL DISCOUNTS. TO BE OBTAINED THROUGH ANY DRUG HOUSES, OR DIRECT FROM

BREIDENBACH & CO., Wholesale & Export Manufacturing Perfumers, 157^B New Bond St., LONDON, W.

Illustrated Price List for 1886 forwarded upon application. New Illustrated Shipping Catalogue now ready.

BARBER'S ORIGINAL CRIMSON INK

FOR MARKING LINEN,

WHICH IS CHANGED BY HEAT TO A JET BLACK.

Put up for Retail Sale in 6d., 1/, 2/, 2/6, and 5/ Bottles.



Also BARBER'S CONCENTRATED LIQUID COCHINEAL,

FOR COLOURING JELLIES, CUSTARDS, &c.

PUT UP IN 6D. AND 1/ BOTTLES

MANUFACTURED ONLY BY THE PROPRIETORS—

G. BARBER & CO.,

6 Worcester Drive, Club Moor, LIVERPOOL.

Can be obtained through any of the Wholesale Firms, or from the Proprietors,

G. BARBER & CO., CLUB MOOR, LIVERPOOL.

ESTABLISHED 1810.

H. BROOKS, PEEL & CO., COLLAPSIBLE TUBE MANUFACTURERS

PATENTEES AND SOLE MANUFACTURERS OF THE

PORTABLE METAL SPRINKLER STOPPER,

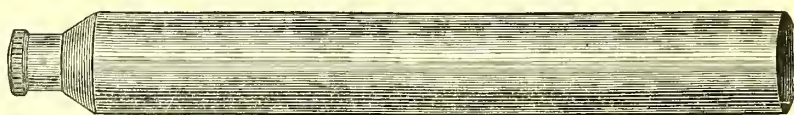
AND DEALERS IN

GLASS BOTTLES FOR PERFUMERS AND OTHERS.

STEAM FACTORIES:

31 Lime St., Camden Rd. (Offices), and Bartholomew Rd., Kentish Town, London, N.W.

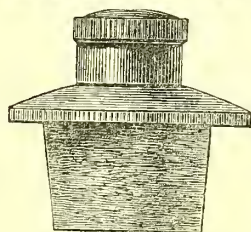
COLLAPSIBLE TUBES OF ALL SIZES.



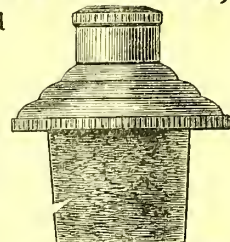
For Perfumes, Artists' Colours, Soaps, Cosmetics, Creams, Oils, Varnishes, &c. These Tubes are inexpensive and portable, and may be applied to many useful purposes besides those above mentioned.

SOLE MANUFACTURERS AND PATENTEES OF

THE PORTABLE METAL SPRINKLER STOPPER,



With Cork fitted thereon for bottles of any size, and having apertures of various dimensions, especially adapted for Perfumes, Hair Washes, Lime and Glycerine Essences, &c. These handsome stoppers give a character and finish to the most ordinary bottles to which they may be applied. Gilt or plain; and put up if required in handsome glass lid boxes, suitable for shop counters and show cases, at moderate prices.



No. 18a.

THE "TORSION" PATENT SPRINKLER.

The two designs, Nos. 18a and 19a, are those to which we direct special attention, as sizes being in general use; other sizes will follow promptly to meet all requirements, on which Caps with two or more holes will be introduced to meet the public taste. Particular attention is called to the latest improvement in our Patent Metallic Stopper, the "Torsion."

This New Stopper adheres to the design of the original patent, which has been universally acknowledged as an ornamental and inexpensive article for the Toilette, as possessing all the advantages of a "Permanent and Indestructible Stopper, suitable for Bottles of all Sizes and Shapes," with the additional security it affords, that the Cap can never be entirely unscrewed, consequently it cannot be lost. It is specially effective as a Sprinkler, while giving a more prompt and copious, yet economic, supply, through the improved action of the Cap. Such combined advantages, in an article of exquisite finish, have long been desired, and it is thus submitted for general approval, and its usefulness when tried will be appreciated by all.

Illustrations, Price Lists, &c., can be had on application, or through any Wholesale House in town or country. All Orders received direct will be promptly attended to.



No. 19a.

CAUTION.—All Stoppers of our Manufacture are made of Pure Tin, and have the name of H. BROOKS & CO. stamped on the under side of the rim.

All Tubes are made of Pure Tin unless specially ordered of Mixed Metal, from the smallest size up to 13 in. by 23.

NINE PRIZE MEDALS.**GUSTAV BOEHM'S****TRANSPARENT GLYCERINE SOAP**, Manufactured with Pure Spirits of Wine and Purest Glycerine. The first Soap of this description introduced in this market, and still recognised the best. Prices have been reduced lately.**PURIFIED TOILET SOAPS**, Highly Scented. Large variety of such delicate Scents as Ess. Bonquet, Jockey Club, Musk, Oppopanax, Rose de Mai, New Mown Hay, Violet, Lavender, Tea Rose, Mignonette, and many other distinct Perfumes.**CALCUTTA GOLD MEDAL EXHIBITION SOAP**, assorted in 12 different scents and colours.**WINDSOR, HONEY, OATMEAL, COAL TAR, CARBOLIC**, and all kinds of ordinary Toilet Soaps.**EXTRACTS OF FLOWERS**, Triple, Double, and Simple.**FLORAL PERFUMES**, with appropriate Silk Flower Labels. See special notice in THE CHEMIST AND DRUGGIST, July edition, 1885.**LAVENDER WATER, FLORIDA WATER, EAU DE COLOGNE**, and all other Toilet Waters.**COLONIAL TOILET WATER**—an excellent composition for use in hot climates.**DENTIFRICE. VIOLET POWDER**, and all other Requisites for the Toilet.**PETROSINE POMADE and PETROSINE IN BULK**—a Petroleum Jelly, guaranteed never to turn rancid.MANUFACTORIES { 38 CHARLES STREET, CITY ROAD, LONDON, E.C., and at
OFFENBACH o/MAIN, GERMANY.**F R I C T I O N .**

THE MOST PLEASANT MODE OF APPLYING IT TO THE SKIN IS BY THE

PANSTREPTON (or All-Pliant) FLESH BRUSH.

The best Article ever introduced for the purpose.

PRICES FROM 22/ to 36/ per doz.

Of all **WHOLESALE HOUSES** or of the **SOLE MANUFACTURER**,
R. CONDOR, 2 BINGFIELD STREET, LONDON, N.**OKELL'S ORIGINAL
MONA BOUQUET**

Retail, 1/, 1/9, and 3/6; Wholesale, 7/, 12/, and 22/6 per doz.

This much-admired Perfume (prepared by the Widow of the late Joseph Okell), may be obtained from the leading Patent Medicine Houses, Wholesale Druggists, and Druggists' Sundry Dealers.

Applications for **WHOLESALE** Agencies to be made to the **SOLE CONSIGNEE, THOMAS WEST, Chemist, 61 Chester Road, Stretford, Lancashire.****CHUBB'S Best SEIDLITZ POWDERS**

—Full Weight—Loose, at 7s. per gross; in lift-off boxes, 7s. 6d., and in hinged boxes, 8s. 6d., per dozen.

CHUBB'S Extra Scented VIOLET POWDER

(WARRANTED PURE STARCH POWDER),

In 1d. Boxes, 6s. gross, and 2d. Boxes, 11s. gross, and in 1/2-lb. and 1-lb. Packets, 10d. per lb.

CHUBB'S Pre- pared FULLER'S EARTH

In 1d. Boxes, 5s. gross, and 2d. Boxes, 9s. gross, and in 3d. and 6d. ROUND Boxes, 1s. 6d. and 2s. 6d. dozen.

SUBJECT TO 15 PER CENT. DISCOUNT FOR CASH.

May be obtained through all the Wholesale Houses, or direct from
CHUBB & CO., 29 OLD ST., LONDON, E.C.
SPECIAL QUOTATIONS FOR LARGE QUANTITIES.**PRICE'S PATENT CANDLE COMPANY LIMITED**

LONDON AND

LIVERPOOL

**PRICE'S GLYCERINE**

HAS RECEIVED THE HIGHEST AWARDS AT ALL THE GREAT EXHIBITIONS.

CAUTION.**A. S. LLOYD'S EUXESIS,**
FOR SHAVING WITHOUT SOAP, WATER, OR BRUSH.

The GENUINE Euxesis bears the following distinctive marks :—

- 1.—The Name **AIMEE LLOYD** on cap of tube.
- 2.—The words "Prepared only by his Widow" in **RED INK** across labels.

Manufactured only by AIMEE LLOYD,
WIDOW OF A. S. LLOYD, formerly of 27 GLASSHOUSE STREET,
3 SPUR STREET, LEICESTER SQUARE, LONDON.

A. S. LLOYD'S EUXESIS,
For Shaving without Soap, Brush, or Water.**CAUTION.**

The only Genuine has a yellow label printed **ONLY** in Black Ink, and bears the original address of the late inventor, "27 Glasshouse Street, Regent Street," the proprietors having purchased, under an administration suit, the Secret, Trade Mark, Goodwill, and Premises:

SOLE PROPRIETORS.

R. HOVENDEN & SONS,
LONDON.

ROBINSON'S ORANGE WINE

(VIN. AURANTII, B.P.)

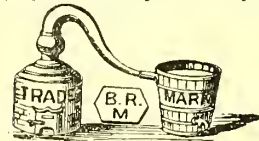
Specially prepared for Quinine Wine, does not deposit, will keep good in any Climate, and well adapted for Export Trade.
Supplied in Casks containing 9, 18, 30, 60, or 120 Gallons. Terms on application.

THE UNIVERSAL CORN AND WART PENCIL.

1 doz. mounted on a handsome Illustrated Show-Card, Retail, 6d. each; Wholesale, 3s. 6d. per doz. It is especially adapted for Export Trade, and may be safely sent to the hottest climates, as each glass tube is hermetically sealed and enclosed in a cardboard case.

N.B.—The above is exempt from Stamp Duty by permission of the Board of Inland Revenue.

CONCENTRATED WATERS.—One Ounce of these Waters added to Forty Ounces of Distilled Water forms a clear Medicated Water (without filtering), similar in every respect to those prepared according to the directions of the British Pharmacopoeia, and free from all Chemical Impurity. They are prepared to supply a want long felt by Chemists and Medical Men, and by their use a fresh supply of any of the Medicinal Waters may be obtained at a moment's notice. They are not affected by age in any climate. N.B.—Used in the proportion of one part to thirty-two of water they represent the Medicinal Waters of the *United States Pharmacopoeia*.



Per lb.		Per lb.		Per lb.		Per lb.	
Aqua Anethi, Concent.	4/0	Aqua Cinnam. Ver. Concent.	6/0	Aqua Foeniculi, Concent.	4/0	Aqua Pimentæ, Concent.	4/0
" Anisi, "	4/0	" Cassiæ "	4/0	" Menth. Pip. "	4/0	" Rosæ "	8/6
" Camphoræ "	4/0	" Flor. Aurant. "	8/6	" Ang. Con. "	6/0	" Rosæ Virgin "	10/0
" Carni "	4/0	" Flor. Sambuci "	8/6	" Virid. "	4/0		

The above are put up in Bottles of ½ lb. or 1 lb. and upwards, each of which has the Inventor's Protection Label over cork.

Wholesale Agents—Hearon & Co., Maw, Son, & Thompson, Lynch & Co., London; Evans, Sons & Co., Liverpool; Woolley, Manchester; Bewley & Draper, Hunt & Co., Dublin; Glasgow Apothecaries' Co., Hatrick & Co.,

Glasgow; Raimes & Co., Duncan Flockhart & Co., J. Mackay & Co., T. & H. Smith & Co., Edinburgh; Foggitt, Thirsk; Goodall & Co., Leeds; Southall & Co., Birmingham; Slinger & Son, York; McKesson & Robbins, New York. Special terms for large quantities may be had from

B. ROBINSON, Distiller and Brewer of British Wines, Church St., Pendleton, Manchester.

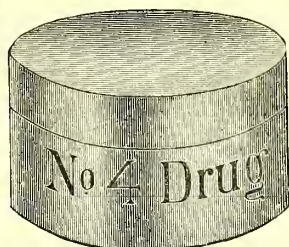
ESTES' AMERICAN DRUGGISTS' & CHEMISTS' TURNED WOODEN BOXES,

PILL, POWDER, & SALVE BOXES.
FINELY-FINISHED FACE AND TOOTH POWDER BOXES.

BOXES FOR SENDING VIALS THROUGH THE MAIL.



Boxes equal to English Manufacture, at much lower prices.
USE WOODEN BOXES IN PLACE OF PAPER OR TIN.



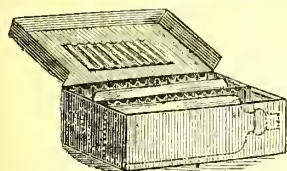
BOXES OF EVERY KIND AND
FINISH MADE TO ORDER.

SOLE AGENTS FOR GREAT BRITAIN,

KILNER BROS.,
KING'S CROSS, LONDON, N.



"The WANT of the PAST, the RAGE of the PRESENT, the BOX of the FUTURE."



BOX FOR 2 BOTTLES, OPEN.

THE UNIQUE FOLDING BOX (Patent),

For the SAFE TRANSIT of Bottles, Fragile Articles, Game, Butter, Eggs,
Cut Flowers, &c., per post and rail.

Patentee and
Sole Manufacturer, **THOS. P. BETHELL, 24 Cable St., LIVERPOOL.**

Prize Medal, International Inventions Exhibition, London, 1885.

Also Specialities for Druggists and Druggists. Sedlitz Boxes, Baking and Condition Powder Cases and Packages.
SATISFACTORY REFERENCE REQUIRED WITH ORDER.

AUSTIN & CO.,

PATENTEES & MANUFACTURERS OF ROUND CARDBOARD AND OTHER BOXES,
BRITISH AND FOREIGN, SHAPED

For POSTAL and general purposes; also PATENT BARREL PACKAGES with Metal ends for dry goods.
Inventors of the "NOVEL" METAL PERFUME SPRINKLERS.

Office & Warehouse—8 GREVILLE ST., HATTON GARDEN, LONDON, E.C.
Steam Works, Mount Pleasant, Gray's Inn Road, London, and Ring Factory, Clonakilty, County Cork.

SOAP AND OTHER BOXES,

Also Soft Wood Staves and Cask Heads,

FOR THE TRADE.

Imported from Norway, ready for nailing together, by

BANKS & RATCLIFFE, 616 Exchange Buildings, Liverpool.

PRICES ON APPLICATION.

CHLORIDE OF GOLD

19/- per dozen
15-grain Tubes
(guaranteed);
Postage, 2d.

The best in the market. Immense quantities sold. Exported
to all parts of the World.

LOUIS ROWLAND (Refiner),
59 South John St., LIVERPOOL



Boxes ready made up, or the Patent Tops only (ready for
making up), are supplied.

SELF-OPENING TIN BOX COMPANY
(GRIFFIN'S PATENT).

Albion Tin Works, York Road, King's Cross, London, N.

THE NEW TIN BOXES for all kinds
of Hermeti-
cally Sealed Preserved Foods, DRUGS and CHEMICALS.

THE NEW TIN BOXES are as cheap
as the ordi-
nary Boxes, require no soldering up, and can be opened with a penny
piece.

THE NEW TIN BOXES are being
adopted by
the largest Food-preserving Houses and CHEMISTS, to whom
references can be given.

THE NEW TIN BOXES are also per-
fect for Tea
and Coffee Canisters, Biscuit Boxes, Confectionery, Paints, Oils,
Varnishes, Soaps, &c.

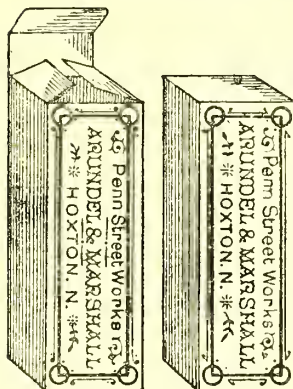
THE NEW TIN BOXES are described
by the Times,
Standard, Chronicle, Illustrated News, Engineer, Grocer, Oil and
Colourman, and Press generally, as the "neatest and most elegant
invention ever made."

FOLDING CARDBOARD BOXES.

FOLDING CARDBOARD BOXES OF ALL SIZES AND VARIOUS FASTENINGS

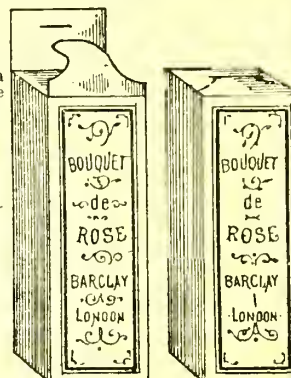
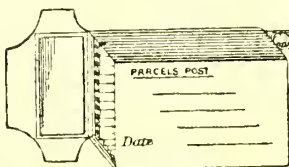
SPECIALLY SUITABLE FOR

PACKING BOTTLES, MEDICINES, SCENTS, LIQUEURS, WINES, SPIRITS, CONFECTIONERY, FANCY
BISCUITS, TEA, FLOUR, TOBACCO, DRY SALTS,
PROPRIETARY ARTICLES, &c.



Regular and various sizes of 2, 3, 4, 6, 8, 12, 16-oz., 1-lb., 1-lb., 1-lb., &c., in stock. As these cases are packed and stored FLAT, and so occupy little space, they are largely used by Shippers. ECONOMY OF SPACE IN STORING.

LINEN COVERED FOLDING BOXES,
EXTRA STRONG.



PARCELS POST BOXES.

Perfectly secure, Bottle being protected by inner wrapping of Patent Corrugated Card Board. Regular Sizes in stock; also with Divisions. Any Sizes or Shapes made.

MANUFACTURERS OF PLAIN AND FANCY BOXES OF ALL DESCRIPTIONS.
SAMPLES AND ESTIMATES FURNISHED. SEE PRICE LISTS. TO BE HAD OF ALL DEALERS.

ARUNDEL & MARSHALL, PENN STREET WORKS, HOXTON, LONDON, N

(Telephone Exchange No. 220; also Telephone Office, No. 27 Falcon Square.)

Prize Medal Awarded, International Inventions Exhibition, London, 1885.

CORRUGATED PAPER,

FOR PACKING BOTTLES AND FRAGILE ARTICLES.

Is lighter and more secure than anything yet introduced as a Parcel Post Wrapping. For transmission of filled bottles—for Quarts, roll the material three or four times tightly, and for Pints two or three times. Very small bottles require only single wrapping.

The CORRUGATED PAPER should extend half an inch beyond the ends of the bottle.

Roll tightly and fold in the ends. The elasticity of the material will keep the bottle rigidly in its place.



SOLD IN ROLLS,

250 feet long, 26 inches wide	20/
100 "	10/
50 "	6/
25 "	4/6

The Material can be cut to any size with an ordinary pair of scissors.

THOMPSON & NORRIS MANUFACTURING COMPANY, LIM.,

ARLINGTON STREET WORKS, ISLINGTON, LONDON, N.

BROOKLYN, N.Y., U.S.A.
10 to 34 Prince Street.

ST. DENIS, PARIS.
205 Avenue de Paris.

BOSTON, MASS., U.S.A.
116 to 120 Fulton Street.

WATERPROOF AND GREASEPROOF

WAX TISSUE

Used by Chemists, Soap Makers, and Confectioners.

It does not adhere, is cheaper than Tin-foil or other substitutes.
This Tissue is specially prepared free from TASTE or SMELL.

PRICES (Special Terms for large quantities).—Half-Sheet Post Free.—Size 20 by 30 inches, 9/8 Ream, 8d. Quire; 17½ by 30 inches, 8/3 Ream, 7d. Quire; 15 by 30 inches, 7/3 Ream, 6d. Quire; Sample Quire Post free (20 by 30 in.), 11d.

F. G. KETTLE,

WHOLESALE AND RETAIL STATIONER,

11 KINGSGATE STREET, LONDON, W.C.



DANGERFIELD'S CELEBRATED SELF-IGNITING MATCH CASES.

WITH AND WITHOUT CIGAR CLIPPER.

Pronounced the acme of perfection. It has no equal Mechanical Construction, Workmanship, Quality Material, Neatness, Compactness, Convenience, and Low Price. The fortunate possessor has only to push the slide when a match presents itself lighted. Your clothes, wall and furniture need no longer be injured or defaced. Sold everywhere. With or without cigar clipper. Treb coated XX Tin, 1/ each. Solid Nickel Silver, 2 each. Free to any part of the world on receipt of price (P.O. C Special prices for export. FRANCIS S. DANGERFIELD, Proprietor and Sole Manufacturer, ACHUI N.Y., U.S.A. C. BRANDON & Co., 16 Red Lion Square London. Sole Agents for Great Britain and Ireland.

FOR CLEANING PLATE.

BRADLEY & BOURDAS'S
ALBATUM or WHITE ROUGE

For Cleaning Gold, Silver, and Plated Goods.

Since its introduction as a substitute for the ordinary Rouge, a quart of a century ago, the sale has amazingly increased both at home and abroad. A trial is only needed to prove its superiority over other plate powders in use. Sold in Boxes at 1s. and 2s.; Tins, 6s. 6 Pont Street Belgrave Square, and 48 Belgrave Road, London, S.W.

AYRTON & SAUNDERS' NOVELTIES & SPECIALITIES.

Write for Samples, and get some good Saleable Lines that need only be shown to command a large sale.

THE SPECIALITIES WE ADVERTISE ARE ALWAYS WORTH ATTENTION.

THE "SILVER" DRESSING COMB.

(BINNS' PATENT.)

COOL, REFRESHING, AND INDESTRUCTIBLE.

These Combs are perfect, and will last for years—each Tooth being well finished and securely riveted—and the whole Comb being "Silver-plated" rendered very attractive. They are sent out in separate Boxes, handsomely labelled. Ten Sizes and Patterns. Price, 12/ per dozen.

Sample Comb sent per post on receipt of 14 Penny Stamps. Liberal Terms to large Buyers and the Wholesale Trade.

SCOTCH-WOOD PUFF BOX.

FITTED WITH SILK TOP PUFF IN DISPLAY COUNTER-BOX.

Retail at 1/ each—9/ per dozen. 4/6 per Cabinet. A sample Cabinet sent per Parcel Post for 4 6.

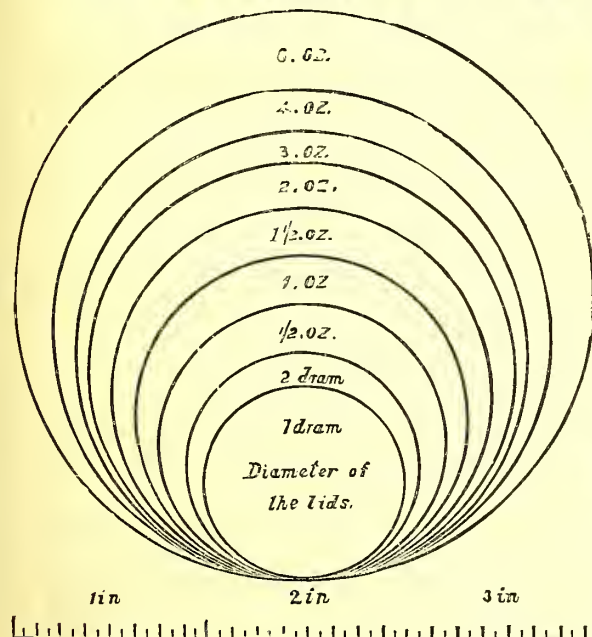
In addition to this we have some Splendid Shilling Lines in

EBONIZED, PAPIER-MACHE, JAPANESE AND FLORAL APPLEWOOD, &c

"ENGLISH" WILLOW BOXES

BEST QUALITY—EVERY BOX WARRANTED.

GUARANTEED OUR OWN MAKE.



	1dr.	2dr.	4oz.	1oz.	1 1/2oz.	2oz.	3oz.	4oz.	6oz.	1/2oz. to 2oz.	
Deep.....	9d.	10d.	1/	1/2	1/4	1/6	2/2	2/6	3/	4/6	per gross.
Cut down..	9d.	9d.	11d.	11d.	1/2	1/4	1/6	2/	2/6	—	„

Country Sizes as Illustration.

WILLOW BOXES, ORDINARY.

	1dr.	2dr.	4oz.	1oz.	1 1/2oz.	2oz.	3oz.	4oz.	1/2oz. to 2oz.	
Deep.....	7d.	8d.	9d.	11d.	1/	1/4	2/	2/3	3/9	per gross.
Cut down....	7d.	8d.	9d.	9d.	1/	1/3	—	—	—	„

SAMPLES SENT ON APPLICATION.

SPECIAL TERMS TO LARGE BUYERS.

GENUINE MENTHOL CONES.

QUALITY GUARANTEED & EXCELLENT VALUE.

Immense quantities have been sold, and the sale is still increasing. Put up in a most saleable form in Turned Wood Pedestals.

EACH DOZEN IN A LABELLED OUTER FOR COUNTER SHOW

6d. Size, 4/ per dozen; 1/ Size, Boxwood Cases, 9/ per dozen.

SAMPLES SENT ON RECEIPT OF 5d. AND 10d. IN STAMPS.

Any Firm using Willow Boxes, and wanting something they can rely upon as being of good and uniform quality, will find it advantageous to write for Samples of our Brand.

All Goods delivered Free to any London, Liverpool, or Manchester House for enclosure.
Special Quotations given to Wholesale Buyers.



AYRTON & SAUNDERS

149 DUKE STREET, LIVERPOOL.

TITTERTON & HOWARD,

WHOLESALE AND EXPORT

HAIR, TOOTH, CLOTH, AND NAIL BRUSH MANUFACTURERS,



8 & 10 GREAT TITCHFIELD ST., LONDON, W.

FACTORY—ALBION WORKS, WEST STREET, HACKNEY.

Illustrated Price Lists on application.

A. GÉRARD, 21 JEWIN CRESCENT, LONDON, E.C.

MANUFACTURER OF

HIGH-CLASS TOILET BRUSHES, FRENCH DRESSING COMBS, MIRRORS, NAIL, TOOTH, AND SHAVING BRUSHES, AT THE VERY LOWEST PRICES.

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SPECIALITIES in Solid Back Toilet Brushes and Oval Hand Mirrors.

ESTABLISHED A.D. 1815

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THE LEADING & STANDARD ARTICLE

PREPARED ONLY BY THE WIDOW OF THE LATE JOHN MURPHY

CHEMIST AT THE ORIGINAL ESTABLISHMENT 11, NILE STREET, EAST ROAD, HOXTON N

TRADE MARK. Estab^d 1815.

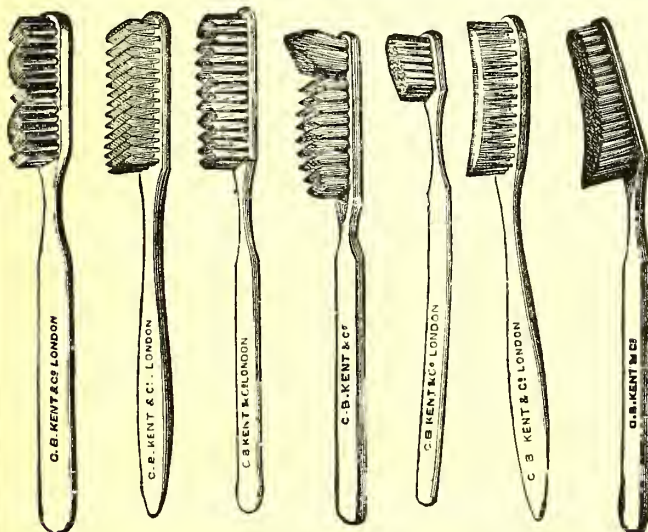
NO OTHER ADDRESS — BEWARE OF WORTHLESS IMITATIONS.

STANDARD G.B. KENT & SONS BRUSHWARE

Offices: 11 Great Marlborough St., London, W. Factories: 46 Bonner Road, London, E.

KENT'S TOOTH BRUSHES.

N.B.—Special Factories at Victoria Park are set apart for this one description of Brush.



THE NOVELTY TOOTH BRUSH.
TRIPLE CEMENTED AND EXTRA SECURE.
Depôt for America: 91 Fulton Street, NEW YORK.

Price per doz.

First Quality	G. B. Kent & Sons		LONDON	6/8
Second Quality	Imperial		Quality	5/0
Third Quality	WARRANTED		LONDON	4/0
Fourth Quality	WARRANTED		SECURE	3/6
Fifth Quality	WARRANTED		SOUND	3/0
Badger Hair Tooth Brushes	..	..	4/6 6/0 8/6 11/0 per doz	
Children's "	..	..	3/0 3/6 4/0 "	
Tooth Brush Guards	..	..	Metal, 3/3 Porcelain, 4/6 "	
Isananned Wet Brush Holders	..	..	..

KENT. * TRANSFER * GOSNELL. * OF BRUSH BUSINESS.

JOHN GOSNELL & CO.,
93, UPPER THAMES STREET.

LONDON.

G. B. KENT & SONS,
11, GT. MARLBOROUGH STREET.

*G. B. Kent & Sons have taken over, by private treaty, the whole of the
Fancy Brush Manufacturing Business of John Gosnell & Company,*

INCLUDING
JOHN GOSNELL & Co's

TRICHOSARON

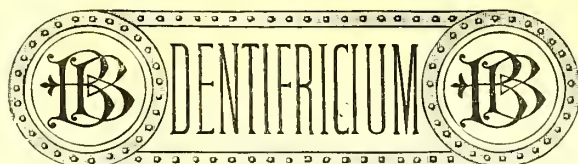
TOILET
BRUSHES,

IN ADDITION TO

G. B. KENT & SONS' TOILET, TOOTH, PAINTERS, HOUSEHOLD & STABLE STANDARD BRUSHWARE.

SPONGES.—At 11 Great Marlborough Street is a Sponge Room worth the inspection of the Trade.
G. B. Kent & Sons' Illustrated Catalogue, containing 700 woodcuts, will be forwarded free on application.

Title Secured. Price 2/6. Cases of Six, 14/-



TRADE MARK 27668.

INVENTED BY A TALENTED PHYSICIAN.

Recommended by eminent Surgeon-Dentists. Patronised by the "Monde élégant" as the best and most agreeable liquid Dentifrice yet introduced.

PROPRIETORS—

BARTON BROTHERS, BRIGHTON.*Also Sole Proprietors of the Original***"BRIGHTON GLYCERINE CREAM."**

WHOLESALE FROM

Messrs. Barclay, E. Cleaver, Edwards, Newbery, Sanger, Sutton, & Co.

**FERGUSON'S PATENT TOOTH POWDER OR DENTIFRICE SPOON,***For Supplying Tooth Powder or other Dentifrice to the Brush.*

The spoon is fitted inside a suitable bottle, which forms a receptacle for the dentifrice, the spoon itself acting as an air-tight stopper to the bottle.

8s. per dozen; retail, 1s. each.

The bottles are sold empty, consequently they increase the sale of tooth powder from bulk. Wholesale from

J. A. FERGUSON, 53 GT. GEORGE STREET, LEEDS,
And the following London Agents:—Barclay & Sons; Bourne & Taylor; Edwards & Sons; Hovenden & Sons; Lynch & Co.; Maw, Son & Thompson; Newbery & Son; Thompson, Millard & Co.; and all the principal Provincial Houses.**IMMENSE SALE.****SOLD EVERYWHERE.****WOODS' ARECA NUT TOOTH PASTE,***For Removing Tartar, Whitening the Teeth, and Sweetening the Breath.***PRICE, 6d. and 1s. per Pot.****MAY BE HAD OF WHOLESALE HOUSES THROUGHOUT THE GLOBE.**

BETHSHAN.	The certain cure for the TOOTHACHE.
BETHSHAN.	If used as a Tooth-powder will prevent
BETHSHAN.	Neuralgia and absolutely arrest all decay
BETHSHAN.	Of the Teeth, also preserve them healthy
BETHSHAN.	and sound to extreme old age.
BETHSHAN.	Everyone should try it, especially Smokers.

Can be obtained of all Chemists, or will be sent free by post on receipt of 35 stamps, direct from the Proprietors, **HARDEN & CO., Shirley, Southampton.**

AGENTS WANTED.

ROZALIUM

(REGISTERED)

POWDER OR PASTE**IS THE BEST DENTIFRICE.**

It is scientifically prepared by a Dental Surgeon, of large practice and great experience, and is intended to supply a long felt want, viz., a Preparation that will thoroughly cleanse the Teeth, and at the same time help to preserve them. As a stimulant to the Gums, and a preservative of the Teeth, Rozalium is not to be surpassed; it gives to the Teeth a pearly whiteness, to the Gums a healthy rosy colour, whilst it prevents decay by neutralizing the acids which accumulate between the Teeth, and imparts to the Breath a most delicious fragrance.

In Boxes, Pots, and Bottles, 1s. 6d. and 2s. 6d.

May be obtained from the Wholesale Houses, or direct from the Proprietor—

**J. W. MARTIN, Dental Surgeon,
PENG.****WHITE AND SOUND TEETH.****JEWSBURY AND BROWN'S
ORIENTAL TOOTH PASTE.**

This old-established and increasingly favourite Dentifrice has been Fifty Years before the Public. It is warranted to retain its properties and keep in good condition in any climate.

The original and only genuine is manufactured solely by

**JEWSBURY and BROWN,
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and is distinguishable by the Trade Mark, printed in red and green, a facsimile of which is annexed. Particular attention should be paid to this guarantee of genuineness, as numerous imitations are offered.

Sold universally by Chemists and Perfumers, at 1s. 6d. and 2s. 6d.

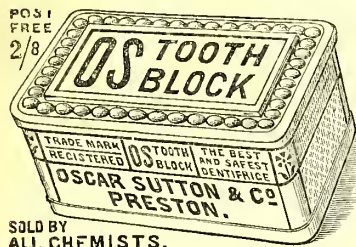


The Trade and Shippers supplied by the leading houses in London and elsewhere. Bills and Show Cards forwarded on receipt of address cards, and directions for enclosure.

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O.S. TOOTH BLOCK.

Be particular to observe that the Registered Trade Mark and the name "OSCAR SUTTON & CO." are stamped on all that are genuine, as worthless imitations are in the market.



POST FREE 2/8
SOLD BY ALL CHEMISTS.



TRADE MARK.

OVER 1,000 TESTIMONIALS.

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Write to the above address for particulars.

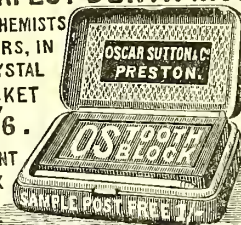
BEST & SAFEST DENTIFRICE

SOLD BY ALL CHEMISTS
AND PERFUMERS, IN
ELEGANT CRYSTAL
TOILET CASKET

PRICE 2/6.

ALSO IN PATENT
METALLIC BOX

PRICE 1/-



AGENTS WANTED.

DR. G. H. JONES

SURGEON DENTIST.

AGENTS WANTED.

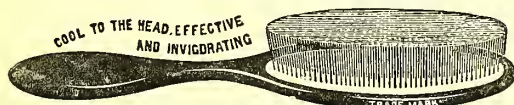
Pamphlet on PAINLESS DENTISTRY sent post free to any address, which explains the most perfect system of fitting the

PRIZE MEDAL ADAMANTIAN TEETH.

S. G. Hutchins, Esq., Surgeon Dentist to H.M. the Queen, said, in writing to Dr. G. H. Jones:—"Your system is the perfection of Painless Dentistry, and your Teeth are the best, safest, and most life-like." Protected by Royal Letters Patent in the chief countries of the world. Awarded GOLD MEDALS, London, Paris, Calcutta, New Zealand. HIGHEST AWARDS, Nice, Amsterdam, Antwerp. GOLD MEDAL, International Exhibition, London, 1885. Only Address—

57 GREAT RUSSELL STREET,

Facing the Entrance to the British Museum, LONDON.

USEFUL AND NOVEL PRESENTS**ASHWORTH'S NEW PATENT "METALLIC COMB-BRUSH."**

SET WITH FINE STEEL WIRES AND ENCLOSED WITH BRISTLES.

These brushes are delightfully cool to the head, producing a most agreeable sensation, and will penetrate the most luxuriant hair without injury. They are altogether machine-made; the black handles are covered with a coating of Japan burnt on and then polished. These handles are also in solid pieces, and hence will not fall apart as in the case of brush handles covered with veneer. The latter brush shows a most remarkable development in metallic brush making. It is made of fine hard drawn steel wires, about the thickness of ordinary bristles. This penetrates, SMOOTHS, and FIXES THE HAIR. It is, to express the words of a user, "Simply perfection as a hair brush, and must, when known, take the place of the bristle brush for toilet uses." Send for a SAMPLE BY POST AND TRY IT.

Prices of Metallic Comb-Brush, post free.

Ladies' and Gentlemen's Black Japan....	1/6, 1/9, 2/0
" " Lionite-figured	1/6, 1/9, 2/0
" " Ivory-coated	1/9, 2/0, 2/3
Gentlemen's Black Japan, Military Style	1/6, 2/0
Dog, Cattle, and Horse Brushes	2/0, 2/6, 3/0

New Patent Fine Steel Comb-brush with or without bristles, post free.

Ladies' and Gentlemen's Black Japan	1/9, 2/0, 2/3
" " Ivory-coated	2/0, 2/3, 2/6
Gentlemen's Black Japan, Military Style in fine steel only, without bristles	— 2/3, 2/6

These brushes are now enclosed with bristles in order to give them a more finished appearance. They can, however, be had without the bristles, but all orders for the former must quote the letter "B" following the number of brush required, as "Fine Steel Black Japaned No. 8 B," or "No. 9 B," &c.

All Goods are forwarded safely packed in Neat Boxes.

ASHWORTH BROS. MOSS BROOK WORKS,
COLLYHURST, MANCHESTER, ENGLAND

Dr. C. R. Coffin's AMERICAN DENTIFRICE.

Prepared only by WILLIAM DARLING, Chemist, Manchester. May be had from S. Maw, Son, & Thompson; Barclay & Sons; F. Newbery & Sons; Sanger & Sons; and any Wholesale House in London. Price 2s. per Box, and Family Jars 10s. each.

TO DENTISTS AND CHEMISTS.—Every description of Artificial Teeth made at greatly reduced charges. Best work and best materials only.

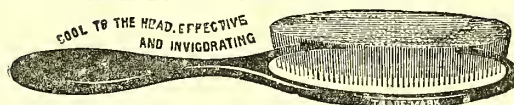
An Upper or Lower Set, inclusive of Teeth Rubber, &c., £1 1s.
Ditto, ditto, on Platina, £2 2s.

Send for Price List.

Twenty years' experience in mechanical work.

LESSONS GIVEN IN MECHANICAL DENTISTRY.

F. BUCK, 6 Hanover Place, Upper Baker Street, London, N.W.

REGALOS UTILES Y NUEVOS.**El Nuevo "Cepillo-peine metálico" Patente ASHWORTH.**

HECHO CON ALAMBRES FINOS DE ACERO SUJETOS CON BREZO.

Estos cepillos son muy refrescantes para la cabeza, producen una sensación muy agradable en su uso y penetran la cabellera mas abundante sin hacerla el mas mínimo daño. Se fabrican a máquina. Los de mango negro se cubren con un barniz de japon que luego se pulimentan. Los mangos son macizos y por lo tanto no pueden romperse como los chapados. Este cepillo representa un adelanto marcado en el arte de fabricar estos artículos. Se componen de alambres finos templados esmeradamente, y son en tamaño iguales a los brezos ordinarios, y penetran, alisan y arreglan los cabellos perfectamente. Segun dice uno que se ha servido de son "la perfeccion misma y tienen a la fuerza que suplantará el cepillo de cerda tan luego que sean conocidos." Enviar por una muestra por el correo.

Precios del cepillo-peine metálico franco de porte en Inglaterra.

Pera señoras y caballeros, negro de Japon....	1'80, 2'10, y 2'50
" " Lionita fantasia	2'10, 2'50, y 2'70
" " chapado de marfil	1'80, y 2'50
Militares para caballeros negro de japon	2'50, 3'00, y 3'60
Cepillo-peine metálico, patente nuevo sin brezos o con ellos, franco de porte en Inglaterra.	

Negro de japon para señoras y caballeros

Chapado de marfil

Negro de japon militares para caballeros de alambre fino sin cerdas

Se montan algunos de estos cepillos con cerdas para darles mejor apariencia y acabado, pero se surten sin ellas tambien. Siempre que se desee montaje de cerda, es esencial poner la letra "B" despues del número del cepillo requerido, como por ejemplo, "Acero fino negro de japon "No. 8 B." o "No. 9 B." etc.

Se remite cada cepillo en una cajita separada y se ejecutan los pedidos para grandes cantidades segun y cuidadosamente.

ASHWORTH BROTHERS, MOSS BROOK WORKS,
COLLYHURST, MANCHESTER, ENGLAND.

INDEX TO ADVERTISEMENTS.

See Pages 41-44.

"IMPERIAL"

(REGISTERED BRAND)

SOFT SOAP

IN TINS



1 lb. each net.

2 do.

3 do.

3½ do.

4 lb. each net

6 do.

7 do.

And Firkins &

Half-Firkins.

May be had through all Wholesale Druggists, Oil Merchants, and Drysalters
and (in wholesale quantities only) of the Manufacturers,

THE CHISWICK SOAP CO.,

CHISWICK, LONDON, W.

Makers of the "10% Carbolic," "P.B. Olive," "B B B," "B.B," and other Soft Soaps

GOLD MEDAL, CALCUTTA EXHIBITION.

Also PRIZE MEDAL at the INTERNATIONAL HEALTH EXHIBITION
for SOFT SOAPS.

TO OUR CUSTOMERS AND FRIENDS

London, E.C.: January 1886.

DEAR SIRs,—At this particular season we are anxious to express our thanks for your orders during the past twelve months, and also to acknowledge with much satisfaction the large and continued increase in the sale of our Specialities, which has necessitated the occupation of the adjoining Warehouse, where, with an increased staff of workers, we hope to carry out our fixed principle—to supply promptly, at the lowest prices, the best value for money.

We remember, with much pleasure, that many of our customers have transacted business with us for more than thirty years, and we beg to assure you that this lengthy experience in conducting a successful Wholesale Trade will be earnestly and anxiously exercised in the future in the prompt execution of all orders committed to our care.—Wishing you a prosperous New Year,

We are, Dear Sirs, yours respectfully,

BOURNE, JOHNSON & LATIMER.

SPECIAL NOTICE.

WE ALLOW A SPECIAL DISCOUNT of 2s. in the £ for Cash on large or small parcels. This is the highest discount allowed by any firm publishing a catalogue, and is a far greater concession than 5 per cent. and carriage paid.

ANY NUMBER OF ENCLOSURES will be received and packed with Goods, and we are always ready and willing to send to any part of London for odd articles not kept in stock.

NO BOOKING FEE is charged on small parcels sent per Foster, Sutton, Globe, or any Railway Company.

LETTER ORDERS are almost invariably despatched on the same day as received.

OUR NEW PRICE LIST will be issued soon, and will bear comparison with any other catalogue. In the meantime customers who favour us with their orders may rely on having goods charged at the lowest prices.

CHANGE OF ADDRESS.

The Postal Authorities and the Board of Works having changed the name of the old thoroughfare, Castle Street, Holborn, to

FURNIVAL STREET, E.C.

we beg to notify the change.

LETTERS SHOULD NOW BE ADDRESSED:—

BOURNE, JOHNSON & LATIMER,
34 & 35 FURNIVAL STREET, LONDON, E.C.

J. SANGER & SONS'

PRICE CURRENT,

WITH ADDENDA AND ALTERATIONS,
IS NOW READY,

AND WILL BE FOUND TO BE A MOST COMPREHENSIVE LIST OF

**PROPRIETARY
MEDICINES,
PERFUMERY,**



**DRUGGISTS'
SUNDRIES,
LOZENGES,**

MINERAL WATERS, ETC.,

AND WILL COMPARE FAVOURABLY WITH ANY OTHER LIST AS TO
PRICES CHARGED.

POST FREE ON RECEIPT OF BUSINESS CARD.

Purchasers of Druggists' Sundries, Smelling Bottles, Hair Brushes, Combs, Sponges, Thermometers, Filters, and Boxes of all descriptions should pay a visit to our Showroom before purchasing elsewhere, in order to compare our prices and quality against other houses.

AGENCIES OF ALL KINDS UNDERTAKEN ON FAVOURABLE TERMS.

J. SANGER & SONS, 489 Oxford Street, LONDON, W.

1,000 HANDBILLS.

SPECIAL NOTICE.

1,000 HANDBILLS.

HIMROD'S CURE FOR ASTHMA.

We can now supply 1,000 4to Handbills of superior quality, with name and address, and printed on one side only, with order for $\frac{1}{2}$ dozen direct from

J. SANGER & SONS, 489 OXFORD STREET, W.

KEARSLEY'S WIDOW WELCH'S FEMALE PILLS.

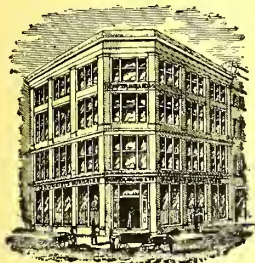
These are universally acknowledged to be the Genuine, and Druggists may safely recommend them.

CAUTION!—The Proprietors of Kearsley's Original Widow Welch's Female Pills find it incumbent on them to caution the purchasers of these Pills against various imitations by parties who have no knowledge of their peculiar preparation, the Original Recipe having been sold to the late G. Kearsley, of Fleet Street, whose Widow found it necessary to make an Affidavit, for the protection of her property, in the year 1798. The Genuine Recipe for **Widow Welch's Female Pills** has been prepared by them for 99 Years! Chemists are particularly requested to remark that, as a testimony of authenticity, each bill of directions contains an Affidavit, and bears the signature of "C. KEARSLEY," in writing, also engraved on the Government Stamp, and each box is wrapped in WHITE paper.

PRICE 27s. PER DOZEN, SUBJECT TO USUAL DISCOUNT.

Special Quotations to Shippers and for large quantities, on application to
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THOMPSON, MILLARD & CO.



LIMITED,

CURTAIN ROAD, LONDON, E.C.

Telegraphic Address, "BEATROP LONDON."

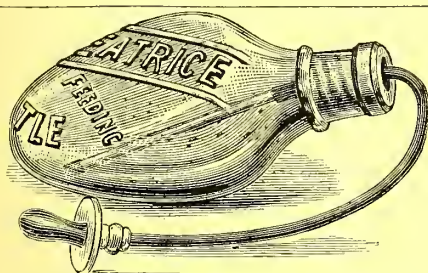


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DRUGGISTS' SUNDRIESMEN, DRUGGISTS, SURGICAL INSTRUMENT MAKERS, PERFUMERS, ETC.

Sole Proprietors of the "Mater," "Bristol," "Imperial,"

BEATRICE AND TROPICAL FEEDING BOTTLES.



THE "BEATRICE" FEEDING BOTTLE.

With opal glass screw stopper, best black rubber fittings, each in handsome shouldered box arranged to stand the feeder in while filling, and tube and bottle brush, per dozen 8s, subject to usual discount. This Feeder combines the advantages of the straight and bent neck bottles, can be laid on either side without leakage, and is easily cleaned.



THE "TROPICAL" FEEDING BOTTLE.

THOMPSON, MILLARD & Co.'s new PATENTED Boat-shape Feeding Bottle. Fitted with screw glass stopper or metal screw cap at end to allow of cleaning. In two sizes. Illustrated Price List on Application.

Special attention paid to Export Orders, and Illustrated Price Lists posted free to any part of the world on application.

Our goods give universal satisfaction, and buyers may with confidence favour us with a Trial Order.

THOMPSON, MILLARD & CO., LIM., LONDON.

ONLY GENUINE WITH THIS TRADE MARK.



(Huste-Nicht)
L. H. PIETSCH & CO.'S
Honey-Herbs-Malt-Extract

Warranted entirely free of all injurious ingredients.

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OF TESTIMONIALS RECEIVED;
ALSO LETTERS OF THANKS
From the Society of the Red Cross for
Nursing Sick and Wounded Soldiers in
St. Petersburg,

Under the Patronage of Her late Imperial Majesty
the Empress of Russia.

Madame ADELAIDE RISTORI.
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&c. &c. &c.

MACK'S DOUBLE STARCH

SUPERIOR and CHEAPER in
use than any other.

Advantages :-

1. It gives the Linen an UNUSUAL STIFFNESS, ELASTICITY, and a BEAUTIFUL GLOSS. No Borax, &c., needed.
2. Irons with the GREATEST EASE WITHOUT STICKING to the iron.
3. The Linen need NOT BE DRIED after washing, but can be IRONED AT ONCE.
4. This Starch containing NOTHING INJURIOUS, the Linen is WELL PRESERVED by its use.

Order direct from

P. R. DAVID,
10, Acomb Street, Manchester,
Sole Representative for the United Kingdom.

ONLY GENUINE WITH THIS TRADE MARK.



(Huste-Nicht)
L. H. PIETSCH & CO.'S
Honey-Herbs-
Malt-Extract,

Warranted entirely free of all injurious
ingredients.

The Best Remedy for Affections of
the Throat, Asthma, Bronchial
Catarrh, Bronchitis, Cough, Con-
sumption, &c., &c.

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At 1/9, 2/9, and 4/6 the Bottle.
Caramels 1/1½ the Bag.

THE P. R. D. CLEANING POWDER,

FOR

Domestic, Trade, & Industrial Use.

The CHEAPEST, CLEANLIEST, and MOST
EFFICACIOUS POLISHING POWDER yet
introduced for cleaning ALL KINDS OF
METAL GOODS, SILVER PLATE, GOLD,
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Used in the German Army SOLELY
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Warranted NOT to INJURE the most
DELICATE metal work.

Made in six different degrees of fine-
ness, and sold at 4d., 5d., 6d., 7½d.,
1s., and 1s. 3d. per package.

On receipt of One Stamp a Sample of
each No. will be sent post free to any
address by

P. R. DAVID,
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Sole Consignee for the United Kingdom.

RISTORI EAU-DE-COLOGNE. Manchester.



St. Petersburg.

ONLY GENUINE WITH THIS LABEL.

PATRONAGE kindly accepted by Madame
ADELAIDE RISTORI.

Refreshing, Invigorating, Best of all Brands.

OPENS WITHOUT CORKSCREW.

THE MOST AGREEABLE DISINFECTANT KNOWN.

THE BEST AND NICEST PERFUME EXTANT.

NONE without this Stamp in RED on

Label & Cork is genuine.



"Prove all things; hold fast that which is good."

THE P. R. D. CLEANING POWDER,

For Domestic, Trade, and
Industrial Use.

Testimonial from
United Small Arms Factories,
Birmingham.

"The Polishing Powder is in
GENERAL use at our Factories, and
has so answered its purpose that
we have DISCONTINUED all other
PREPARATIONS of the KIND, and
EXCLUSIVELY use YOUR INVENTION;
the metal is in no way affected by
its use; tarnish is easily removed,
and the polish which results is
lasting and stands well the influ-
ence of the atmosphere."

For Trade Prices of any of the above Specialities apply to Wholesale Houses, or direc to

P. R. DAVID, 10, Acomb St., MANCHESTER.

Sole Consignee for the United Kingdom and the Colonies.

N.B.—AGENTS APPOINTED.

FRANCIS NEWBERY & SONS,

ESTABLISHED 1746,

1 KING EDWARD ST., NEWGATE ST., LONDON, E.C.

(Telegrams—NEWBERY LONDON.)

Importers of and Dealers in Patent Medicines, Druggists' Sundries, Perfumes, and other Proprietary Goods.

PROPRIETORS OF OR SPECIAL DEPOT FOR—

AYER'S American Medicines.
BELL'S Secrete Oil, and Unique Vegetable Extract.
BERDOE'S Triple Extracts and Bottled Perfumes.
BROCKEDON'S Pat. Compressed Pure Bicarbonate of Soda or Potass; Chlorate of Potass
COLLINS' Cephalic Snuff.
"CUTICURA" Remedies.
DALBY'S Carminative (Gell's—the original).
DOUGHTY'S Voice Lozenges.
GOURAUD'S Oriental Cream.
GRIMAULT & Co.'s Specialities.
GUILD'S (Dr.) Green Mountain Asthma Cure.
HIMROD'S Cure for Asthma.
INGLUVIN (W. R. Warner & Co.'s).
JAMES' (Dr.) Fever Powder (the only true) and Analeptic Pills.
JAYNE'S (Dr.) American Medicines.
KIDDER'S American Pastilles.
LENTIFORMS, or Compressed Tabulo-Spheroidal Masses of Various Drugs, as Chlorate of Potass, &c., in lb. or $\frac{1}{2}$ lb. tins.
RAYNAUD'S Oil of Lavender (Mont Blanc).
RYAN'S Pectoral Essence of Colts-foot.
STEERS' Camomile Drops.
" Opodeldoc (the only genuine).
WARNER & Co.'s Sugar-Coated Pills, Parvules, Ingluvin, Quina-mine, &c.

TO DRUGGISTS:

F. NEWBERY & SONS

tender their best thanks for cordial support received in the past, and hope by due attention to the necessarily complicated details of business to merit continued favour in the future.

TO DRUGGISTS AS WELL AS TO SHIPPERS:

NEWBERY'S 1886 CATALOGUE

should prove a useful and profitable book of reference. It will be mailed, on application with Trade Card, to any part of the World.

TO MANUFACTURERS

of Goods in sale, or likely to sell, amongst Druggists, F. Newbery & Sons' House offers exceptional facilities for the effective starting in Great Britain of goods previously unknown. Depots undertaken. Stock Warehoused and covered by Insurance. Advertisements issued and controlled, and the details of a "succursale" carefully kept in hand.

SPECIALITIES.

LOW QUOTATIONS TO WHOLE- SALE BUYERS.

NEWBERY'S LINT.

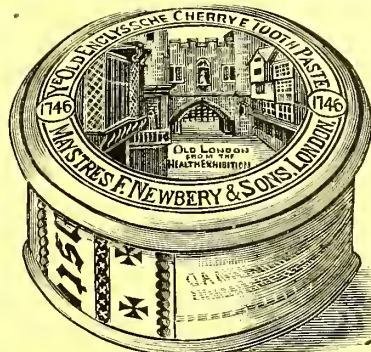
" COTTON WOOL.
" OILED SILK.
" ENEMAS.
" CORKS.
" ADHESIVE PLASTER
" HAIR BRUSHES.
" NAIL "
" TOOTH "
" COMBS.
" FEEDING BOTTLES.
" CARDED SPONGES.
" SPONGE, in original cases, $\frac{1}{2}$ cases, $\frac{1}{4}$ cases.
" SMELLING SALTS.
" TRUSSES.
" ELASTIC STOCK-INGS.
" RESPIRATORS.
" FLESH GLOVES.
" SPONGE BAGS.
" CORN PLASTERS.
" CHEST PROTECTORS
" COURT PLASTER.

A1 BRAND MENTHOL, and

DRUGGISTS' SUNDRIES GENERALLY.

THE BEST "SHILLING" TOOTH PASTE IN THE MARKET.

Since the introduction a few months since of this elegant Toilet Preparation, F. N. & SONS have received various Testimonials indicating the favour with which this superior Tooth Paste is regarded by a critical public. The cover forms an artistic souvenir of the Health Exhibition.



DESIGN REGISTERED FOR PERFUMERY, UNDER TRADE MARKS ACT.

Since the introduction a few months since of this elegant Toilet Preparation, F. N. & SONS have received various Testimonials indicating the favour with which this superior Tooth Paste is regarded by a critical public. The cover forms an artistic souvenir of the Health Exhibition.

IT PAYS! IT PLEASES THE PUBLIC! IT SELLS WHERE SHOWN!

NOTICE TO THE TRADE.

ALLEN & HANBURY'S

ARE NOW PREPARED TO OFFER

LOZENGES

OF THEIR OWN MANUFACTURE,

MADE ACCORDING TO

British Pharmacopœia,

Throat Hospital Pharmacopœia,

AND

Private Formulæ.

SAMPLES AND PRICES ON APPLICATION.

ALLEN & HANBURY'S,
PLOUGH COURT, LOMBARD ST., LONDON.

WORKS: BETHNAL GREEN.

Telephone Number,
1852.

Advertisers' & Buyers' Reference List, AND INDEX TO ADVERTISEMENTS.

TELEGRAPHIC ADDRESS—
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LONDON.

SCALE OF CHARGES FOR ADVERTISEMENTS IN "THE CHEMIST AND DRUGGIST" IF ORDERED FOR FOUR INSERTIONS IN ADVANCE.

Whole Page	£5 0 0 each Insertion net	Quarter Page	£1 12 0 each Insertion net
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N.B.—An order for 13 insertions means 12 in THE CHEMIST AND DRUGGIST and 1 in THE CHEMISTS' AND DRUGGISTS' DIARY. The same rule also applies to an order for 7 insertions, or to an order for insertion until countermanded, if such order is in force in October in any year. Remittances payable to EDWARD HALSER.

THE PROPRIETORS DO NOT VARY THEIR QUOTED TERMS UNDER ANY CIRCUMSTANCES.

ACETIC ACID

Dunn and Co.
Jackson, A. H.
Morris and Callard (Salts)
Scott and Co.

AERATED AND MINERAL WTS

Asenlap
Apollinaris (Hunyadi, Fried-
richshall, and Apollinaris)
Barnett and Foster
Chemists' Aerated Waters
Association
Dunant, Geo., and Co.
Ellis (Ruthin)
Galleis, E. (Min.)
Harrison, W. B.
Hassall and Co. (Citric Acid,
Phospho)
Hunyadi Janos
Idris and Co.
Ingram and Royle (Mineral
and Vichy)
Jewsbury and Brown
La Bourboule
Mills and Co. (Bourne)
Mumby, Chas., and Co.
Schacht, W., and Co. (Kronen-
quelle)
Schweppe and Co.
Talbot and Co.
Taylor, T. and F. J.
Vichy Thermal
Younger and Ridley (Temper-
ance Wines)
[See GINGER ALE.]

DITTO PLANT

[See SYPHONS AND ESSENCES.]
Barnett and Foster
Bratby and Hinchliffe
Brett's, Lim.
British Syphon Co.
Bush, W. J., and Co. (Foam
Producer, &c.)
Favaret, H.
Guert Frères
Meadowcroft, W.
Rylands, Dan
Tyler, Hayward, and Co.
Vallet, L. (Bottles)
Willocks, N. G. ("Victory")
[See SYPHONS.]

ALKALOIDS

Fletcher, Fletcher, and Steven-
son
Howards and Sons (Cinchona)
Smith, J. and H.

AMMONIA

May and Baker

ANALYSTS

Corbyn, Stacey and Co.
Eagar and Co.
Nicholson, W. J.

ANILINE DYES

Crawshaw, E.
Pronk, Davis

ANNATTO

[See BUTTER COLOURING.]

ANNOUNCE- MENTS

The Chemists' Annual Ball
Bourne, Johnson, and Latimer
Fletcher, Fletcher, and Steven-
son
Harvey and Newman

AGENCIES

ABROAD

Campbell, Neil S. (Colombo)
Cocking (Japan)
Davison, A.
Eisner and Mendelson (Phila-
delphia)
Evans, Sons and Mason
(Canada)
Felton (Melbourne)
Fougers (New York)
Hornum-Jee Ruttonjee (Bombay)
Kempthorne (Nw. Zealand)
Lennon (Port Elizabeth)
Phillips and Co. (Bombay)
Prosser, E., and Co. (Sydney)
Reed, F., and Co. (Natal)
Roberts (Paris, &c.)
Rocke (Melbourne)
Sharland and Co. (Auckland
N. Z.)
Shirreffs and Co. (Allahabad)
Symes and Co. (Simla)

APPARATUS

Allen, J., and Sons
Cetti, E. (Meteorological)
Cubley and Preston (Nitro-
meters)
Follows and Bate
May, Roberts (Water-bath)
Morgan Crucible Co.
Orme (Scientific)
Pat. Plumbago Co. Co.
Rothermel, Paul (Vinegar)
Southall Bros. and Barclay
(Scientific)
Wolters, Otto (Balances)

BANDAGES

Bailey and Son
Bole Hall Mill Co.
Dibs, Cuxson, and Co.
Hutchinson, A., and Co. ("Heft-
band")
Liverpool Lint Co.
Robinson and Sons
Seabury and Johnson

BANK

Birkbeck Bank

BEDS, WATER

Hutchinson, A., and Co. (Sheet-
ing Rubber)
Pocock Bros.

BENZENE, &c.

Sanger and Sons

BICARB. SODA

Gaskell, Deacon and Co.

BISMUTH PREP.

May and Baker
Symes and Co.

BOOKS

Atfield's Chemistry
Baillière, Tindall
Churchill, J. and A. ("The
Physician's Pharmacopoeia")
Dobell, Dr. (Bournemouth)
James, Dr. Prosser (Guide to
New B.P.)
Kimpton (Discount)
Smith, J. G. ("Aerid Wtrs")

BOTTLES

Aire and Calder
Barnett and Foster (the
"Eclipse" Stopped)
Barratt and Elers (Screw
stopped)
Brefits, Lim.
Brooks, Peel (Perfumers)
De Luca, G. V.
Hearn, Riddle
Kilner Bros.
Lang, Jonas and Jules
Poths
Rylands, Dan
St. Clement's Glass
Simcock, T.
Simcock, W.
Thompson, Millard and Co.
(Feeding)
Toogood
Vallet
York Glass Co., Lim.

BROKERS DRUG &c.

Lambert, S., and Co.
Morrison, R., and Co.

BOXES

Arundel (Folding Card)
Austin and Co. (Cardboard)
Ayrton and Saunders (Willow)
Banks & Ratcliffe (Soaps, &c.)
Bethell, Thomas P. (Folding)
Brohm, Aug. (Cardboard
Folding)
Estes' Turned Wood
Evans, Sons, and Co. ("Puff, &c.
Patent Sample
Robinson and Sons (Cardboard)
Self-Opening Tin Box Co.
Thompson Norris Manfg. Co.

BUTTER COLOUR, &c.

Bush, W., Son, and Co. (Mari-
goldiner and Henckel

BRUSHES

Ashworth (Metallic)
Candron, R. (Flesh)
Gérard, A. (Toilet)
Kent, G. B., & Sons (Gnrl.)
Lynch and Co. (Electric)
Maw, Son & Thompson
Newbery and Sons
Titterton and Howard

CAMPHOR

Howards and Sons
Keene and Ashwell (Homœo-
pathic)
May & Baker
Murray, Sir James (Fluid)

CAPSULES

Betts and Co. (Metallic)
Chevalier (Solubles)
Denoual, J. (Medicinal)
Southall Bros. and Barclay
(Pelletier's Quinine)

CARRIAGE PAID NOTICES

Toogood, Wm.

CATALOGUES

Baies Bros.
Barclay and Sons
Bourne, Johnson and Latimer
(New Price List)
Quarterly Price Current (Maw's)

CEMENT

Foulkes
Kay (Coaguline)

CHALK PRECIP.

Dunn and Co.
Levermore and Co.

CHEMICALS

Bernstein Vogt (Fine)
Bramwell, E., and Son
Brunner, Mond & Co. (Bicar-
bonate of Soda)
Bush, W., and Co.
Dunn and Co.
Earpe and Co.
Fletcher, Fletcher & Stevenson
Gaskell, Deacon and Co. (Bi-
carbonate of Soda)
Howards and Sons (Pharma-
ceutical)
May and Baker
Smith, T. and H.
Sutton and Co. (Volumetric
Analysis)
Zimmermann, A. and M.

CHLOROFORM, &c.

Duncan, Flockhart
Macfarlan, J. F.
Smith, T. and H.
Zimmermann

CHEST PROTECTRS

Evans, Sons, and Co. ("Savars")
Haywood, J. H.
Maw, Son and Thompson
Pattinson, Geo.
Thompson, Millard and Co.
Toogood, W.

CHLORODYNE

Bage, T., Blyton, and Co.
Davey, (Brown's)
Freeman
Towle, A. P.

CIGARETTES

Hill, J.

CIGARS

Symonds and Co.
Whincup, J. G. L. (Havannah)

CITRIC ACID

Hassalls (Phospho)

COCAINE

Howards and Sons

COCOA AND CHO- COLATE

Cadbury Bros.
Fry (Malted)
Richards, J. M. (Delacere's)

COFFEE

George and Welch (Dandelion)
Symington (Various Essences)

COD-LIVER OIL

Allen and Hanburys
Baies Bros.
Beesley, J. E., and Sons (Iodized)
Jensen, J., and Co.
Smith, T. J.
Southall Bros. and Barclay
(AI)

COMPRESSED MEDICINES

Drysdale and Co. (Leo's Chlo-
rate)
Hooper, B., and Co.

COLLAPSIBLE TUBES

Brooks, H., Peel and Co.

COMBS

Ayrton and Saunders
Suthers

COMPOSITION POWDER

Baines and Co. (Essence of)
White, Dr.

CORN CURES

Chave and Jackson (Oelandine)
Evans, Sons & Co. (Plasters)
Harvey's Pencils
Lorimer and Co.
Robinson, B.
Young's

CORRUGATED PAPER

Thompson Norris Manufg. Co.

CRUCIBLES

Morgan Crucible Co.
Pat. Plumbago Co.

DOG MEDICINES

Rackham and Co.
Spratts (Patent) ("Fibrine")

DENTIFRICES

Barton
Beddard, J.
Darling (Coffin's)
Ferguson (Dentifrice Spoon)
Harden and Co. (Bethshan)
Jewsbury and Brown
Martin, J. W. (Rozalium)
Newbery and Sons
Rimmel
Sutton, O., and Co.
Thompson and Capper
Truefitt and Co., Lim.
Woods, W. (Areca Nut)

DENTISTRY

Buck, F. (Lessons)
Jones, Dr. C. H. (Mechanical)

DRESSINGS, SURG.

[See SURGICAL.]

DISINFECTANTS

Corbyn, Stacey and Co. (Pure
Terbenc)
Harrison and Co. (Hydroleine)
Jeyes' Perfect Purifier
Kreochyle (Boroglyceride)
New Carbolic Sanitary Co.
Rimmel
Sanitas
Wyleys and Co. (Pure Terbenc)

Advertisers' and Buyers' Reference List (continued).

**DRUG AND GRIND-
ING MILLS**

Burroughs, Wellcome and Co.
(Enterprise)
Parnall, William, and Co.

DRUGGISTS' SUN.

Ayrton and Saunders
Baiss Bros.
Barnes (Carrageen Poultice)
Bourne, Johnson
Evans, Lecher and Webb
(Hawley's Counter Adjuncts)
Evans, Sons (Savars)
Hockin, Wilson and Co.
Lairitz (Pine Wood)
Lynch and Co.
Maw, S., Son and Thompson
May, Roberts and Co.
Newbery, F., and Sons
Pattison, Geo.
Sanger and Sons
Savars
Simcox, W.
Thompson, Millard
Toogood

DUBBIN

Dales, J. T.

DUTCH MEDCNS.

Bieber, J. D.

DYES

Ayrton and Saunders
Crawshaw, E., and Co.
Frunk, Davis

EAU DE COLOGNE

David (Pietisch's Ristori)
Farina, J. M. (Gegenüber)
Farina, J. M., No. 4

ELECTRIC APPAR.

Darton, F., and Co.
Orme and Co.

ENEMAS

Ingram and Son
Lynch and Co.

ENGINES

Crosley Bros. (Gas)

ENGRAVERS

Barker, W., and Son

ESSENTIAL OILS

Bush, W., Son and Co. (Im-
porters of)
Bush, W. J. (Lemons, &c.)
Cockling (Japan Peppermint)
Fulton (Eucalyptus)
Field, C. W.
Fratelli de Pasquale
Jackson, J., & Co. (Peppermint, &c.)
Lambert, S., and Co.
May and Baker
Morrison, R., and Co.
Oates, Geo. (Sicily)
Restuccia (Sicilian)
Rocke, Tompsitt (Eucalyptus)
Stevenson and Howell
Symes (Oil, Lavender)
Todd (Am. Peppermint)
Wright, L., and Urmey

**ESSENCES, FRUIT
AND SOLUBLE**

Ainsworth and Clayton
Broom, W. T. (Ess. Ginger Ale)
Bush, W. J., and Co.
Field, C. W.
Hay's Soluble Lemon, &c.
Jackson, J., and Co.
Langdale, E. F.
Lorimer and Co.
May and Baker
Meadowcroft, W.
Stevenson and Howell
Sutton, Francis and Co. (Stan-
dard Solutions)

EXTRACT, MEAT

Brand and Co.
Griffiths and Browett (Appa-
ratus)
Hugo, Brown and Co.
Kreochyle
Liebig Co.
London Manufacturing Co.
Mason, Geo., and Co.
Pothe (Leube Rosenthal)
Richards, J. M. (Delacre)

ETHER

Duncan, Flockhart and Co.
(Chilton)
May and Baker
Robbins

EXTRACTS, FLUID

Baiss Bros.
Barber, G., and Co.
Burgoyne, Burdidge
Evans, Sons and Co.
Harker, Stagg
Stearns, F., and Co.
Thompson, Henry Ayscough,
and Son

FACE POWDERS

Chubb, J., and Co. (Violet)
Foulkes

FEEDING BOTTS.

Bourne, Johnson and Co.
Bucraft's Lim.
Evans, Sons and Co.
Hearn, Ridell and Co.
Kilner Bros.
Lang, J., and J.
Maw, Son and Thompson
May Roberts
Richards, Charles (Tube
Cleaner)
Simcock, T.
Thompson, Millard and Co.
Toogood, W.

FILTERING

Doulton and Co.
Judson, D., and Son
Maiguen (Filter Rapide)
Mawson and Swan
Schwenkner, E., and Co. (Paper)
Silicated Crbn Filtr Co.

FOAM PRODUCERS.

Bush, W. J., and Co.
Field, C. W.

FOOD PRESRVTV.

Kreochyle (Boroglyceride)

**FOOD, INFANTS'
AND INVALIDS**

Barelay and Sons (Diabetes)
Hearon, Squire (Malted)
Jeusen (Peptone)
Loeflund and Co.
Ridge, Dr.
Savory and Moore (Pancreatic)
Squire (Malted)
Scott's Midthin Oat Flour
Squire (Malted)
Van Abbott (Diabetic)

FORMULE

Brooks, T.

FULLER'S EARTH

Chubb, J., and Co.
Hynam, J.

**FURNACES, PORT-
ABLE**

Morgan's Crucible Co.

GAS ENGINES

Crosley Bros.

GINGER ALE

Bingley, J.
Harrington and Co.
Hay, W.
Kinnmond
Mills, R. M.
Ross and Co.
Schweppé (Dry)

GLOVES, BATH

Condron (Flesh)
Titterton and Howard

GLYCERINE

Fink
Price's Candle Co.

GOLD CHLORIDE

Rowland, Louis

**GRANULAR PRE-
PARATIONS**

Bishop, A. (Various)
Bush, W., and Co.
Evans, Sons
Stearns, F., and Co.

**GRINDING
MACHINES**

Follows and Bate

GUMS

Fink (Arabic, &c.)

GUTTAPERCHA

Duncan, Flockhart
Stevens, P. A. (White)

**HAIR PREPARA-
TIONS**

Bates, T. W. (Frizzetta)
Chesebrough Mfg. Co.
Hoyles, G. (Balm)
James and Co. (Herbl. Pom.)
Rimmel
Rogers, Wm. (Hair Lotion)
Rowland's Macassar
Sturrock's Oleagena
Towle Toilet Cream (Thorn-
ton's)

HERBALISTS

Bastin and Co.
Butler, McCulloch
Potter and Clarke

HOMŒOPATHIC

Bristol and W. of England
Epps, James, and Co.
Gilbert, W.
Gould, E., and Son
Keene and Ashwell
Leath and Ross
Thompson and Capper

HONEY

White, George, and Sons

HOSPITALS

London Homœopathic

HYPOPHOSPHITES

Dunn and Co.

ICE

Barnett and Foster
Harrison, W. B.

INHALERS

Dr. Churchill Co.
Toogood, W.

INK

[See MARKING.]

Antoine
Bewley and Draper
Clarke, J. T.
Duncan, Flockhart

INSECTICIDES

Galzy, E.
Sandford

KETCHUP

Tyrer, P.

KID REVIVER

Dales, J. T.

LABELS

Blake and Mackenzie
Baskerville Printing Co.
Bowers Bros.
Ford, Shapland
King, W. R.
Townsend (Exeter)

LARD

Cooper, J. (Purifier)
Ewen, J.

LEATHER

Moore, A. F. (Chamois)
Shaw, Alexander and John

LEECHES

Butler, McCulloch
Fitch and Nottingham
Potter and Clark

LICORICE

Craven, M. A., and Son

LIME JUICE

Feltow and Sons (Spécialité)
Iridis and Co.
Montserrat (See Evans)
Ross and Co.

LINSEED

Kemp, W., and Sons
Mumford

LINT

Liverpool Lint Co.
Newsome (Surgeous)
Robinson and Sons
Seabury and Johnson

LOZENGES

Bage, T. Beyton, and Co. (Me-
dicated and Terebene)
Craven, M. A., and Son
Gibson, R. (Manufacturer)

MAGNESIA

Bishop, A.
Dinneford (Fluid)
Murray, Sir James (Fluid)

MALT EXT., ETC.

Burroughs, Wellcome and Co.
(Kepler's)
Concentrated Produce Co.
Lim. (Hopeline)

MARKING INKS

Barber, G., and Co. (Crimson)
Bond's Daughter
Christian, J.
Clarke, J. T.
Murphy, J.

MATCHES

Dangerfield (Cases)

MEDICINE**CHESTS**

Day, Son and Hewitt (Veterin.)

MENTHOL

A 1 Menthol Depot, J. G.
Shirley, Proprietor
Ayrton and Saunders (Cones)
Boehm, J. (Charms)
Christy and Co. (Cones)
Cocking and Co.
Hockin, Wilson & Co.
Lorimer and Co.
Shirley
Symes and Co.
Todd, A. M.

MERCURIALS

Bush, W., and Co.
May and Baker

**METHYLATED
SPIRITS**

Burrough, J.
Gibb, I., Smith and Co.
Harvey, J. and W.
McNair and Co.

METHYLENE

Robbins, J., and Co.

MICROSCOPES

Darton, F., and Co.

MIXING

Bracher and Co.
Follows and Bate

MORPHIA

Macfarlan and Co.
Smith, T. and H.
Wink, J. A., and Co.

MUSK

Symes and Co. (Thibet)

MUSTARD

Finch, Rickman
Johnson, J. H. and S. (Ess. Oil)

NIGHT LIGHTS

Clarke, S.

**NITRO-GLYCE-
RINE TABLETS**

Martindale, W.

OILS, PAINTS, &c.

Allen, J.
Aspinall, Aspinall & Co.
Bingham Oil Refining Co.
Follows and Bate (Mill)
Holt, A., and Co.
Pease, J. R., and Co.
Prunk, Davis (Bronze, &c.)
Staton and Cooper (Pigments)

OINTMENT BASES

Chesebrough (Vaseline)
De Pass, E. A., and Co.
Evans, Sons & Co. (Fossiline)
Grindley (Petroleum Jelly)
Geoline Manufacturing Co.
(Petroleum Jelly)
Saunders, C.

PAINTS

[See OILS.]

PAPER

Ayrton and Saunders (Curl and
Toilet)
Kettle, F. G. (Wax Tissue)
Richards (Gayetty's)

PARALDEHYDE

Zimmermann, A. and M.

PATENT AGENTS

Horn and Son

PENS

Gillott
Macniven and Cameron

**PERFUMERY,
FANCY SOAPS**

[See EAU DE COLOGNE.]
Barclay and Sons
Bentley and Co. (Brown
Windsor)
Boehm Gustav (Various)
Briedenbach, Smelling Salts
(Inexhaustible)
Chesebrough Manufacturing Co.
Crown Perfumery Co.
Ewen (Soaps)
Grosmith, J., Son and Co.
Houbington (Perfume)
Jackson, J., and Co. (Lavender)
Maw, Son and Thompson
Monson and Co. (Toilet
Soap, &c.)
Newbery
Osborne, Bauer & Cheseeman,
Ye Olde London Sweet
Scents
Pears, A. and F., Soap (Curious
Advertisement of 100 years
ago)
Rimmel, E. (Specialities)
Rowland and Son (Various)
Royal Perfumery Co. (Edel-
weiss)
Sainsbury, S. (Lav. Water)
Sanger and Sons
Shaw, Alex. & John (Perfumery
Capping)
West, T. (Okell's Mona)
Woolley, Sons and Co. (Powder
Yardley and Co.)

PILL MACHINES

Cocking, T. S.
Findar

PEPSINE, &c.

Bullock and Co.
Burroughs, Wellcome
Jensen, C. L.
Keene and Ashwell
Kühn, B. (Vegetable)
Newbery (Ingluvin)
Savory and Moore (Pancreatic
Emulsion, Peptonised Milk)
Warner and Co. (Ingluvin)
Zimmermann

**PEROXIDE OF
HYDROGEN**

Dunn and Co.
Robbins

PILLS (Coated, &c.)

Allen and Istanburys (Schief-
felins)
Cocking and Son (Sugar-coated)
Cox, A. H., and Co.
Dodd and Co.
Howell
Newbery
Simpson's Herbal
Warner, W. R. (Coated)
Wyleys and Co. (Gelatin Oval)

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Lancaster and Sons (Apparatus)
May and Baker
Newton and Co.
Oppenheimer Bros.
Rowland Louis

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PATENT MEDICNS

Atkinson (Infant Preserv)
Barclay and Sons (General)
Barclay and Sons (Zymolys)
Beecham (Pills)
Bennette (Manna Cake)
Bramwell (Gastric) Henrys
Indian Remedies
British College (Morrison's)
Burgess, E. (Lion Ointment)
Christy and Co. (Various)
Clarke, Bleasdale (Tikheel)
Concentrated Produce Co.
(Hopline)
David (Cough No More)
Edwards and Son
Evans, Lescher (Hawley's
Counter Adjuncts)
Fennings (Powders)
Ferris and Co. (Nepenthe)
George and Welch (Liver)
Henry's Indian Remedies
Henry, R. (Kurartz for Coughs)
Holloway (Pills and Oint.)
Hop Bitters
Horsford (Acid Phosphate)
Howell (Golden Herb Pills)
Hoyles, G. (Cantharidine Balm)
James and Co. (Malmerrine)
James, K. (Sore Throat)
Key Bros.
King, Alf. (Hop Bitters)
Lairitz's Pine Wool
Lalor (Phosphodyne, &c.)
Lincoln (Clarke's Mix.)
Leaoyd E. B. (Kof Kur)
Lowes' Cough Balsam
Lynch and Co.
Morris, S. (Manazell Stomach
Drops)
Mullen Manuf. Co. (Mulleddyne)
Munday, J. (Injection Day)
Newbery and Sons
Powell (Anised Balsam)
Raimes (Composition Ess.)
Richards, J. M. (American, &c.)
Roberts (Foreign)
Sanzer (Widow Welch, &c.)
St. Jacobs Oil
St. Dalmas (Bronchial, &c.)
Smith (Antibiotics Pills)
Sneath (Carpet Renewer)
Spratts (Locurium Oil)
Stearns' Non-secret
Stedman (Teething Powders)
Suther (Compo. Ess.)
Thompson, Millard and Co.
Toogood (Bells Anti-catarth)
Towie, E. (Penny Royal)

FIG POWDERS

Dennis, J. W.
Spong

PITCH

Peace, J. R., and Co.

PLASTERS

Evans, Sons and Co. (on Felt)
(Indiarubber Porous Plasters)
Gibbs, Cuxon and Co.
Hather, W.
Quillian, J., and Co.
St. Dalmas, A. De
Seabury and Johnson
Taylor, E.

PODOPHYLLIN, &c.

Keith, B., and Co.
Smith, T., and H.

PORCELAIN GDS

Bentley (Opal Glass)
Pothe, H., and Co.
Toogood (C.C. Pots, regist)

POLISHING

Baumgartner (La Brillantine)
Bradley, Bourdas (Albatum)
David (P. R. D. Metal)
Day and Raisbeck (Steel)
Osakey, John, and Sons
Pickering and Sons
Seeger, H. (Potatium)

PHARMACEUTI-
CAL PREPARA-
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Bage, T., Blyton and Co.
Baiss Bros.
Barrow, Squire and Co.
Bieber, J. D.
Burroughs, Wellcome (Various)
Chevalier, F. (Solubles)
Clay, Dod and Co.
Corbyn, Stacey (New Preps.)
De Vri's Cinchona Co.
Duncan, Flockhart
Evans, Sons and Co.
Fletcher (Liquor for Syrups)
Gibson, R. (Lozenges)
Harker, Stagg (Various)
Hewlett and Sons
Howards and Sons
Key Bros.
Keith (Conc. Tinctures)
Lorimer and Co.
Martindale (Nitroglycerine)
Oppenheimer (Liq. Eucynum.)
Southall Bros.
Stearns (Non-secret)
Symes and Co.
Walker, Troke
Whiffen (Extr. Cinch.)
Wink, J. A., and Co.
Woolley, Sons
Wyleys (Various)

POULTRY MDCNS

Wright, J. H. (Egg Producer)

PRINTING

Baskerville Co.
Blake and Mackenzie
Bowers Bros.
Ford, Shapland and Co.
Townsand (Exeter)

PYROGALLIC
ACID

Bernstein Vogt.

QUININE SALTS

Corbyn, Stacey and Co. (Ext.
Liq. Cinchona)
De Vrys (Liquid Cinchona)
Drysdale, J. W., and Co.
Howards and Sons
Thomae and Co.
Whiffen, T.
Zimmerman

RENNET

Meyer and Henckel

RUBBER GOODS

Hutchinson, A., and Co.

SALICINE

Macfarlan and Co.
Whiffen, T.

SALINES

Evans, Sons and Co.
Lorimer & Co.

SALT

Hassall, Thos. (Bay)

SANTONINE

Bieber, J. D.

SAUCES

Goodall (Yorkshire Relish)
Lazenby (Harvey's)

SCHOOLS OF
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Central School
Edinburgh Classes
Liverpool School
London Homoeopathic
Manchester College
South London School
The School of Pharmacy
Telford, J.
Westminster College

SEIDLITZ PWDRS.

Chubb, J., and Co.
Stedman

SELTOGENES

British Syphon Mfg Co.
Guere Freres
Idris and Co.
May, Roberts

SHAVING

Hovenden (Euxesis)
Lloyd, A. S. (Euxesis)

SHEEP DIP

Grindley

SOAP (SOFT, &c.)

Chiswick Soap Co.
Mouson & Co. (Cocoa Butter)

SHOP FITTERS

Bygrave, J., and W.
Curtis, J., and Son
Howlett, S.
Lemaître, W., and Co.
Lynch and Co.
Maw, Son and Thompson
Tomlinson and Sons
Treble, G., and Son
Yates, W. S.

SPECTACLES

Darton, F., and Co.
Scott, J. A., and Co.

SPIRIT, PURE AND

METHYLATED
Burroughs (Pure & Methyl.)
Harvey, J. W., and Co.
Jones and Mason (Methyl.)
Macnair, A. (Pure)
Phillips, G., and Co. (Pure)

SPONGE

Cresswell
Kent, G. B., and Sons
Moore, A. F. and H.
Peterson, M.

STAMPS

Clarke (Rubber)
Lindner, M.
London Rubber
Richford, E. M.

STARCH

Critchley (Gloss)
David (Mack's Double)
Harrop's Glaze
Rosenthal

STOPPERS

Austin and Co. (Sprinklers)
Barrett and Elers (Screw)
Brooks, Peel (Sprinklers)
Vallet

STRYCHNINE

Whiffen, T.

SUGAR

Gibson, R.
Hoskin, W.

SURGICAL

Allen, J., and Sons
Bailey, W. H., and Son
Bradley, T.
Cetti, E.
Churchill, Dr. (Lung Inhalant
Co.)
Colwell
De Pass and Co. (Greenoble
Syringe)
Eschmann Bros. and Walsh
(Catheter)
Gibbs, Cuxon and Co. (Dress-
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Haywood, J. S.
Hooper and Co. (Water Beds)
Jensen, C., and Co. (Pallas
Syringe)
Lynch and Co.
Manson and Schramm (Elastic
Gum)
Maw, Son and Thompson
Powell and Barstow (Elastic
Gum)
Scott, W. A. (Instrnts, etc.)
Seabury and Johnson (Tissues)
Stephenson and Travis
Thompson, Millard

SYPHONS

Barnett and Foster
British Syphon Co.
Guere Freres
Idris and Co.
Lang, J., and J.
Melin, C.

SYRUPS

Burroughs, Wellcome and Co.
(Syr. Hypophos Co. Fellows)
Fletcher Fletcher (Liquors)
Lorimer and Co.
Squire (Chemical Food)
Stevenson and Howell

TEA

Edwards, E. M. (Ceylon)
Indian Tea Growers Co.
Pearse and Wheatley
Spinner and Co.
The Gt. Tower St. Tea Co.
Walker and Dalrymple

THERMOMETERS

Cetti, E.
Darton, F., and Co.
Immsch's (Patent Metallic)

TIN FOIL

Betts and Co.

TINCTURE PRESS

Burroughs, Wellcome and Co.
Collingham, R. M.
Follows and Bate

TOBACCO

Follows and Bate (Cutter)

TRADE MARKS
REGISTERED

Horn and Son

TRUSSES

Bailey, W. H., and Son
Colwell
Haywood, J. H.
Lindsey
Lynch and Co.
Scott, W. A.
Sealey (Hard Rubber)

TWINE

Moore, A. F. & H.

URINARY TESTS

Wilson (Papers)

VACCINATION

Association for the supply of
Renner, Dr.

VALUERS AND
TRNSFR. AGNTS.

Brett, F. J.
Orridge and Co.
Waite and Battman

VERMIN KILLERS

Battle, J. R.
Sanford and Son

VETERINARY

Bishoo, E. (Celebrated Lotion)
Chesebrough (Vaseline, &c.)
Corner, R. (Devonshire Oils)
Day, Son and Hewitt
Foster's Poultry Pill
Garbett, R. (Fumigators)
James, R. J. (Blisters)
Rackham and Co.
Spong and Son (Pig Powders)
Spratts (Dogs)
Taylor, Thomas
Walker, Troke and Co.
Wyleys and Co. (Horse Balls)

VINEGAR

Rothermel (Making)

WHOLESALE & EXPT

DRGGSTS

Allen and Hanbury
Baiss Brothers and Co.
Barron, Squire and Co.
Bastiu and Co.
Bieber, J. D. (Hamburg)
Burgess, Willow
Bush, W., Son and Co.
Clay, Dod and Co.
Corbyn, Stacey and Co.
Evans, Lescher and Webb
Evans, Sons and Co.
Evans, Sons and Mason
Harker, Stagg and Moss
Hearon, Squire
Hewlett and Sons
Langton, Edden, Hicks and
Clark
Oppenheimer Brothers
Parke, Davis and Co.
Potter and Clarke (American,
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Raimes and Co.
Stevenson and Howell
Symes and Co.
Thompson, Henry Ayscough
and Son
Thompson, Millard
Walker, Troke and Co.
Woolley, Jas., Sons and Co.
Wyleys and Co.

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Burroughs, Jas.
Durrant, Geo., and Co.
Gallais, E., and Co.
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Corbyn, Stacey and Co.	126, 127	Hutchinson, A., and Co.	190	Leath, and Ross	1	Wright, J. H.	116		
Cornor, R.	96	Hynam, John	116	Leath, and Ross	1	Wyleys and Co.	154, 155		
Cowan, W.	112	Idris and Co.	87	Leath, and Ross	1	Yardley and Co.	115		
Cox, A., and Co.	173	Immissh, M.	6	Leath, and Ross	1	Yates, W. S.	115		
Craven, M. A., and Son	98	India Tea Growers' Association	10	Leath, and Ross	1	York Glass Co. (Limited), Th.	186		
Crawshaw, E., and Co.	73	Ingram and Son	202	Leath, and Ross	1	Young, H. (G. Pattison, propr.)	54, 59		
Creswell and Co.	45, 46, 50	Jackson, A. & H.	170	Leath, and Ross	1	Younger and Ridley	93		
Critchley, T.	117	Jackson, M., & Co. (Orme & Co.)	170	Leath, and Ross	1	Zimmermann, A. and M.	128		
Crossley Bros.	76	Jakson, J., and Co.	143	Leath, and Ross	1				
Crown Perfumery Co.	20	James and Co.	13	Leath, and Ross	1				
Cuhley and Preston	198			Leath, and Ross	1				
Curtis and Son	60			Leath, and Ross	1				
Dales, J. T.	28			Leath, and Ross	1				
Dangerfield, F. S.	174			Leath, and Ross	1				
Darke, E. (Lymph)	174			Leath, and Ross	1				
Darling, W.	33			Leath, and Ross	1				
Darton, F., and Co.	11			Leath, and Ross	1				

LIEBIG COMPANY'S EXTRACT OF MEAT.



*Baron Liebig disclaims all connection
with other Brands.*

CAUTION.—Baron Liebig begs to caution the
Public that his guarantee refers exclusively to
LIEBIG COMPANY'S EXTRACT OF MEAT.

SUGAR- COATED

In GLOBE-STOPPERED PATENT VASES

F. NEWBERRY & SONS have pleasure in
calling the special attention of the Home and Colonial
Trade to this attractive and elegant series of

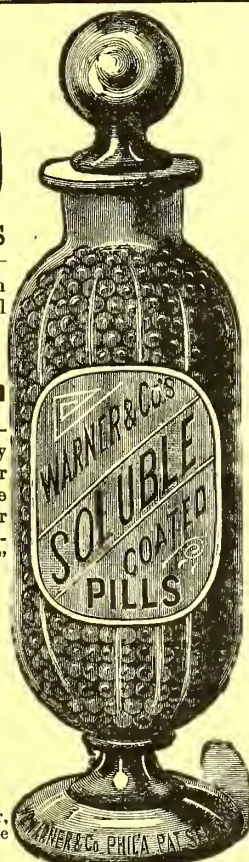
COUNTER SHOW VASES.

The Vases are fitted with hand-painted, gold-
bordered Labels, of which the following are usually
in stock. It is to be noted that the purchaser
should, when ordering, state explicitly the
FORMULA and VASE-LABEL required, as for
example—"Three Vases, No. 120," labelled "Ape-
rient," "Liver," and "Compound Podophyllin"
Pills. Soluble Sugar-coated:—

Antibilious Pills
Aperient Pills
Army and Navy Pills
Aromatic Cachous for the
Breath
*Cathartic and Liver Pills
Compound Colocynth Pills
" Phosphorus Pills.
" and
" Quinine Pills
Compound Podophyllin Pills
" Steel Pills

Cough Pills
Digestive Pills.
Dinner Pills
Female Pills
Liver Pills
Nerve and Tonic Pills
Neuralgic Pills
Pil. Cathart. Comp.
" Rhei Co.
Podophyllin Granules
Purifying Granules
Tonic Pills

Particular attention is invited to Pil. Cathartic and Liver,
No. 120, which has been very generally approved by the
Trade and the Public wherever introduced.



PILLS AND GRANULES,

for the DISPENSING COUNTER, &c.

"PIL. CATHARTIC AND LIVER," No. 120 (Warner & Co.),
298 Bath Crescent, Bath Street, Glasgow,
26th September, 1881.

GENTLEMEN,—While at the International Medical Congress,
I received from your stall, in South Kensington, a small bottle
marked "WARNER'S PIL. CATH. CO." These I have used
with satisfactory results, and I wish to give a further trial in the
Hospital of them as a substitute for Castor Oil after childbirth. . . .
Be kind enough to send a further supply of these Pills. Your early
attention will oblige,
Yours truly,
Messrs. NEWBERRY & SONS. HUGH MILLER, M.D.

Complete detailed Price List of Pharmacopœia
Pills, Granules and Paryules (Sugar-coated) by
W. R. WARNER & CO., forwarded on applica-
tion to any part of the world by

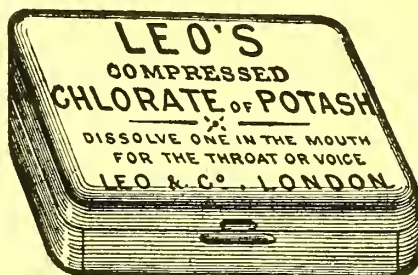
FRANCIS NEWBERRY & SONS,

1 King Edward Street, Newgate Street,
LONDON, E.C.

ESTABLISHED A.D. 1746.

Prices are published in full in **NEWBERRY'S ANNUAL CATALOGUES**, to which attention is directed.

GENERAL DEPOT:
J. W. DRYSDALE & CO.,
4 Bury Street, St. Mary Axe,
LONDON, E.C.



LEO'S

COMPRESSED

Chlorate Potash

In Bulk @ 2/3 per lb. net, in 1-lb. and 5-lb. Bottles. Put up also in Metal Boxes @ 2/3 per doz. net.

SUPPLIED BY ALL WHOLESALE DRUGGISTS.

A sample dozen boxes will be sent, postage paid, to any Chemist, on receipt of 2/6 in stamps.

These are the best of any cheap Compressed Goods in the Market.

ALSO SOLD BY
BARCLAY & SONS, LONDON,
And all other Dealers in Medicines.

J. W. DRYSDALE & CO.,

(Formerly with GEHE & CO., DRESDEN.)

4 BURY STREET, ST. MARY AXE, LONDON, E.C.
Telegraphic Address—"FLORENTINE LONDON."

AGENTS FOR CONTINENTAL AND AMERICAN CHEMICAL MANUFACTURES.

SPECIALITIES.—QUININE and Chincona Products, "Gold and Silver" Brand, Fine Chemicals, Atropine, Santonine, Pepsine, Caffeine, Silver Nitrate, Pyrogallie and Acetic Acids, &c., &c.

AGENCIES AND CORRESPONDENCE SOLICITED.

Extract

OF

BEEF,

PREPARED ON THE

LIEBIG

PRINCIPLE BY

A. SANTA MARIA
& CO.,

PAYSANDU.

Acknowledged to
be Finest
imported,
And guaranteed
to average
60 per cent. of
dry solid Extract.

Analysis made by
Dr. Voelcker & Sons
of each Parcel, can be
had on application
to

HUGO BROWN
& CO.,

41 ORMOND ST.,

LIVERPOOL,

Who will receive orders
for 100-lb. lots in original
tins of 50 lbs. each.

Price 4/6 net cash per lb.

Carriage Paid.

W. EDWARDS & SON,

157 QUEEN VICTORIA STREET, LONDON,

WHOLESALE AND EXPORT DEALERS IN

Patent Medicines and Proprietary Articles,

ENGLISH, AMERICAN, FRENCH, &c.

SOLE AGENTS for ROCHE'S HERBAL EMBROCATION,

Burchell's Anodyne Necklaces, Ford's Balsam of Horehound, Widow Welch's Pills, by Mrs. Smithers, Oxley's Essence Ginger, and the preparations of Messrs. Hudson & Son, late of the Haymarket, London.

PRICE LISTS SENT ON APPLICATION. ORDERS CAREFULLY AND PROMPTLY EXECUTED.

INDEX TO ADVERTISEMENTS, PAGES 41, 44.

THE CELEBRATED LONDON TEAS.

A SAFE AND PROFITABLE ADDITION TO A CHEMIST'S BUSINESS.

EVERY PACKAGE SIGNED



EVERY PACKAGE SIGNED

Tower Tea

Tower Tea

THE LONDON BROKEN TEA ... for Retail at 1/8 per pound.

THE LONDON 2/- TEA 2/0 ..

THE LONDON 2/8 ASSAM TEA... .. 2/8 ..

THE BEST TEA—HANDSOMEST AND PERFECTLY PROTECTED PACKAGES.

A CERTAIN LARGE SALE—MOST LIBERAL ALLOWANCES TO AGENTS.

VOLUNTARY EVIDENCE OF LIVING AGENTS

Chemists—to each of whom direct reference is permitted.

NORTH.

ROTHERHAM, Jan. 2, 1886.
Your Teas are giving great satisfaction in this district. The London Broken Tea is splendid value, and has won for itself a large consumption. It is only necessary to induce families to try these Teas to secure for them a permanent sale.

HUMPHREY DAVY.

CHESTERFIELD, Dec. 30, 1885.
I tried several Tea Agencies in succession, and was dissatisfied with the result, as I failed in each case to establish an increasing demand. Early in 1879 I was induced to take your Teas, and the following is, I believe, a correct statement of the quantities I sold during the first five years:—1879, 979 lbs.; 1880, 3,243 lbs.; 1881, 4,398 lbs.; 1882, 4,755 lbs.; 1883, 6,367 lbs. I have had a steadily increasing demand from the first, and am convinced that your Teas are better value for money than any wrapped Teas offered.

ALFRED LOWE.

YORK, Jan. 7, 1886.
Having been your Agent for some years, I think it only fair to say that the sale of your Teas and the satisfaction they have given to my numerous customers is highly gratifying; and, in my opinion, you place your Agents in a position that enables them to compete with anyone else in the Trade.

W. T. HEY.

SOUTH.

SALISBURY, Jan. 1, 1886.

Since I have had the Agency for your Teas, which is about five years, the sale has been steadily increasing. My customers speak in the highest terms of the Teas, and I find that when a trial has been made a regular customer is the result.

JOHN ROWE.

POWEY, CORNWALL,

Jan. 1, 1886.

I have always found a ready sale for your Teas, and they are much appreciated by all my customers. I sell double the quantity I did at first.

J. WELLINGTON.

HERNE HILL, S.E.

Jan. 6, 1886.

I accepted the Agency for this district about twelve months ago, since which time the sale has gone on steadily increasing. Some of my customers say that the London 2/- Tea is quite equal to what they have been procuring from their grocer at 2/6, 2/8, and 3/-.

JOHN MORTIBOY.

EAST.

GREAT YARMOUTH, Dec. 31, 1885.

It is now above four years' since I commenced to sell your "London Teas," and I must confess that when I ordered the first half chest I did not expect to sell it, but am now pleased to be able to say that it sold without difficulty, and created a demand that has ever since been increasing, and has far exceeded my most sanguine expectations.

W. SHEPPARD POLL.

GRIMSBY, Dec. 30, 1885.

I have been a retailer of packet teas thirty-two years, but was never able to give my customers such good value for their money before as I have been since I accepted your Agency, upwards of four years ago.

I have never had the slightest complaint respecting your Teas, but customers are constantly saying they are the best Teas to be had in the town.

ENOCH PALMER.

WOODBIDGE (Population 4,525).

Jan. 1, 1886.

Since my introducing your Teas in March, 1883, I have sold ten times more than before. The average sale for 1884 and 1885 has been 2,557 lbs. per annum. I am daily receiving gratifying testimonials of the superior quality, blend, and flavour of the "London Teas."

EDWARD J. EATON.

WEST.

BANGOR, December, 1885.

The sale of the Tower Teas with us, considering we do not keep sugar or groceries, has realised our most sanguine expectations, as our last order, over half a ton, will go very soon.

Before your Agency we had tried two others, and failed to sell 28 lbs. in a month.

HAMILTON & JONES.

PEMBROKE, Dec. 31, 1885.

I have much pleasure in bearing testimony to the superior quality of the Teas I have received from you during the five years I have been Agent. The increased sales year by year will be sufficient guarantee of the public appreciation of it. I consider it wonderful value, and of a uniform quality and flavour. I sell twelve chests for every one I used to do in the old style. R. ORMOND.

BISHOP'S CASTLE, Jan. 2, 1886.

I have found the "London Teas" sell very well and please every class of customers. My sales in two years have increased between 600 and 700 per cent., and are still advancing—and, as you are aware, I now order from you every fortnight.

GEO. STRAWSON.

THE GREAT TOWER STREET TEA CO., LIM.

LONDON.

SPONGES.



R. CRESSWELL & CO., SPONGE IMPORTERS AND MERCHANTS, 32 RED LION SQUARE, LONDON, W.C. ; And at PIRÆUS and SMYRNA.

Telegraphic Address, "Cresswell London."

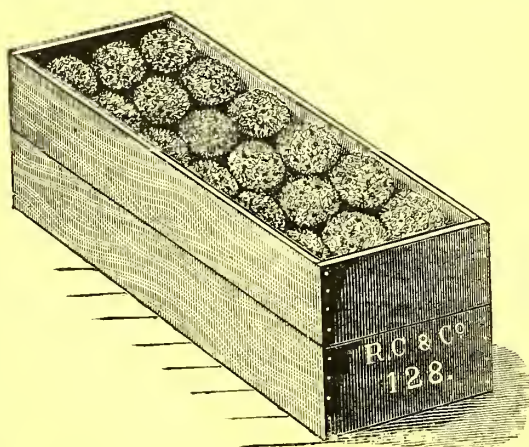
Established 1850.

Sponges adapted specially for Druggists, Perfumers, Saddlers, Brush-makers, &c., will be found fully described in the following Price List—by the Case, Piece or Weight, Sandless or in Sand; on Strings, Cards, and in Blue Card Boxes.

Sponges in Cases.

SANDED OR SANDLESS.

HONEY-COMB SPONGES.



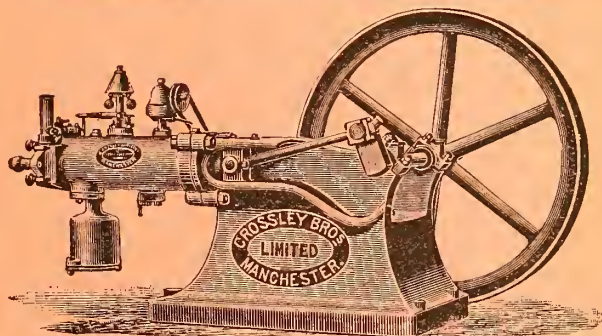
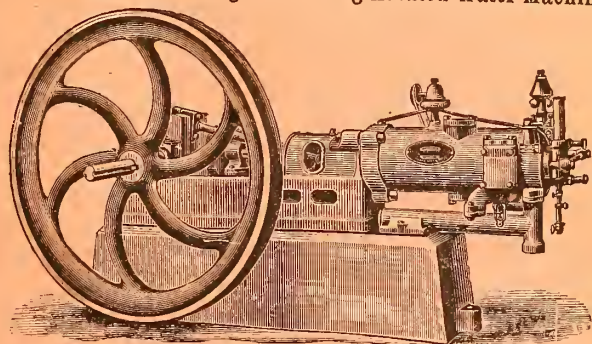
No.	Qty.			Pieces in case, about	Price case.
1	1st	Finest selected shapes, assorted sizes	...	120	240/
2	1st	Do. do. do.	...	75	140/
3	1st	Do. do. do.	...	45	80/
4	1st	Small selected shapes	...	280	140/
5	1st	Superior do. large Bath sizes	...	25	140/
6	2nd	Do. quality shapes, assorted sizes	...	125	160/
7	2nd	Do. do. do.	...	73	84/
8	2nd	Good quality shapes, small	...	280	70/
9	2nd	Do. large Bath sizes	...	25	100/
10	3rd	Do. assorted sizes	...	145	105/
11	3rd	Do. do.	...	85	70/
12	3rd	Do. large Bath sizes	...	25	60/
13	4th	For Stable use, &c.	...	100	50/

See following pages, 49, 50, and 51.

"OTTO" GAS ENGINE.

Consumption of Gas 25 to 75 per cent. LESS
than in ANY other Gas Engine per Brake H.P.

About 200 Engines driving Aerated Water Machines



OVER 15,000 IN USE.

Medals. 35 Silver & Bronze Medals.

LEY'S NEW VERTICAL "OTTO" ENGINES.

Requiring very little ground space.

LEY'S PATENT SELF STARTER.

The Safest, Simplest, and Best.

LEY'S PATENT TWIN ENGINES.

very revolution. The steadiest running Gas Engine yet made.

ENGINE WHICH RECEIVED A GOLD MEDAL AT THE PARIS ELECTRICAL EXHIBITION.

LEY BROS., LIM., OPENSHAW, MANCHESTER

24 POULTRY, E.C.

Glasgow Office: 19 RENFIELD STREET

DE VRY'S CINCHONA COM

IMPORTANT NOTICE.

2 Fisher Street,

Red Lion Square, London

We beg to notify that we have this day transferred our business, together with our formulæ, processes, stock, plant, and goodwill, to Messrs. Fletcher Fletcher & Co. North London Chemical Works, Holloway, to whom all orders for *Ext. Cinchonæ Liq. B.P. (De Vry)* should in future be addressed.

(Signed)

DE VRY'S CINCHONA CO.

January 1st, 1886.

IN reference to the above, we have pleasure in announcing that we have the sole right to manufacture here

Ext. Cinchonæ Liq. (De Vry)

British Pharmacopœia, 1885.

We shall continue to make this well-known preparation in the apparatus constructed for the De Vry's Cinchona Company. Evaporation being conducted in glass vessels only, there is no possibility of metallic contamination, and as the whole is performed *in vacuo*, the alkaloids and their collateral principles are absolutely preserved by heat, oxidation, or other deteriorating influence.

The Extract retains the normal orange-red colour of the percolate from which it is derived. It is distinguished from similar preparations by being PERFECTLY clear, and distilled water, and, when so diluted, by remaining permanently bright and without deposit. We guarantee it to be prepared from none but the finest Red Cinchona bark, and to correspond in every respect to the requirements of the *British Pharmacopœia*.

Ext. Cinchonæ Liq. B.P. (De Vry)

May be obtained through any Wholesale House, or direct from us, at the following

$\frac{1}{4}$ -lb. Bottles, 3/6; $\frac{1}{2}$ -lb. Bottles, 6/6; 1-lb. Bottles, 12/- each.

SPECIAL QUOTATIONS FOR QUANTITIES

Trial Samples free on application to the Sole Manufacturers—

FLETCHER FLETCHER & STEVENS

NORTH LONDON CHEMICAL WORKS,

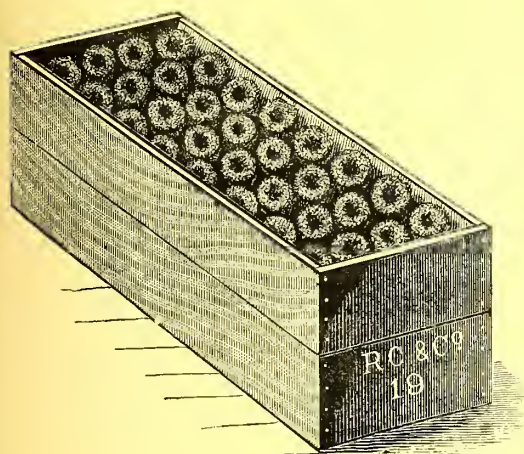
HOLLOWAY, LONDON, N

R. CRESSWELL & Co.,

Sponges in Cases.

SANDED OR SANDLESS.

FINE TURKEY SPONGES.



No.	Qty.		Pieces in case about	Price case.
14	1st	Finest selected Cups, assorted sizes	110	360/
15	1st	Do. do.	60	200/
16	1st	Do. Bath sizes	25	240/
17	2nd	Superior Cups, assorted sizes	110	240/
18	2nd	Do. do.	60	140/
19	2nd	Do. Bath sizes	35	180/
20	3rd	Fine Cups, assorted sizes	110	180/
21	3rd	Do. do.	65	105/
22	3rd	Do. Bath sizes	35	140/
23	1st	Turkey Solids, assorted sizes	100	140/
24	2nd	Do. do.	100	110/
25	1st	Flat Saddle, assorted sizes	50	190/
26	1st	Do. do.	30	120/
27	2nd	Do. do.	50	130/
28	2nd	Do. do.	30	80/

BROWN TURKEY SPONGES.

No.	Qty.		Pieces in case.	Price case.
29	1st	Finest selected, assorted sizes	130	90/
30	1st	Do. do.	70	55/
31	2nd	Superior quality do.	130	63/
32	2nd	Do. do.	70	40/
33	3rd	Slate quality do.	300	25/

FINE EGYPTIAN SPONGES.

A very good-looking and cheap kind of Fine Toilet Sponge; very durable, and soft when wetted.

No.	Qty.		Pieces in case.	Price case.
34	1st	Finest selected, assorted sizes	110	100/
35	1st	Do. do.	210	70/
36	2nd	Good quality do.	110	80/
37	2nd	Do. do.	210	55/

Florida Sponges on Strings.

	Pieces.	Per string.		Pieces	Per string.
A Finest Wool, Bath sizes	12	30/	J Finest Velvet, Bath sizes	12	25/
B Do. do.	12	24/	K Do. do.	12	20/
C Do. do.	12	20/	L Do. medium sizes	15	18/
D Do. medium sizes	15	22/	M Do. do.	15	16/
E Do. do.	15	15/	N Do. do.	15	12/
F Do. do.	15	10/	O Do. do.	15	9/
H Do. medium small	15	7/6	P Do. medium small	15	7/
I Do. do.	15	5/	Q Do. do.	15	4/6

Florida Sponges in Cases.

	Pieces.	Price case.		Pieces.	Price case.
FA Finest Toilet and Bath	150	75/	FD Finest Toilet and Bath	100	150/
FB Do. do.	100	75/	FE Do. do.	100	200/
FC Do. do.	100	100/			

West Indian Sponges (Raw) in Bales.

We hold the largest stock in Europe of these goods, and can quote exceptionally low prices.

Finest Wool	...	...	...	...	from 4/6 to 7/
Finest Velvet	...	...	...	...	4/ to 6/6
Finest Yellow	...	...	...	...	1/6 to 2/6
Finest Grass	...	...	...	...	1/6 to 2/6
Finest Fine Reef...	...	...	...	...	3/ to 6/
Finest Hardhead...	...	...	...	...	2/ to 5/
Finest Glove	...	...	...	...	1/ to 2/6

** Commoner qualities at all prices.

32 RED LION SQUARE, LONDON, W.C.

Sandless Sponges on Strings.

The Strings of Sponges, for which we quote below, are put in a form which will facilitate the trade of wholesale and general buyers considerably. They are compact, of excellent value, and well adapted for display.

HONEY-COMB SPONGES ON STRINGS.

No.		On each string.	Per string.
1	Best Toilet Honey-comb, 1st quality,	18 pieces...	12/
2	" " "	" 18	18/
3	" " "	" 18	24/
4	" " "	" 18	30/
5	" " "	" 12	27/
6	" Bath	" 12	36/
7	" " "	" 12	48/
8	" " "	" 12	60/
9	" " large	" 6	36/
10	" " "	" 6	48/
11	Good Toilet " 2nd quality,	18	9/
12	" " "	" 18	12/
13	" " "	" 18	18/
14	" Bath " "	" 12	27/
15	" " " "	" 12	36/
16	" " " "	" 12	48/
17	Good General " 3rd quality,	18	16/
18	" " "	" 18	12/
19	" " " "	" 18	14/
20	" " " "	" 12	18/
21	" " " "	" 12	24/
22	" " " "	" 12	30/

FINE TURKEY SPONGES ON STRINGS.

No.	Qty.		On each string.	Per string.	No.	Qty.		On each string.	Per string.
23	1st	Superior Fine Turkey Cups	12	18/	37	1st	Sup. Small Fine Trky. Cups, 3 rnds.,	25	18/
24	1st	" " "	12	24/	38	1st	" " "	25	24/
25	1st	" " "	12	36/	39	1st	" " "	25	30/
26	1st	" " "	12	48/	40	2nd Good	" " "	25	15/
27	1st	" " "	12	60/	41	2nd	" " "	25	20/
28	1st	" " "	12	72/	42	2nd	" " "	25	25/
29	1st	" " "	12	84/	43	Good Fine Turkey Solids	" " "	25	9/
30	2nd Good	" " "	12	15/	44	" " "	" " "	25	12/
31	2nd	" " "	12	20/	45	" " "	" " "	25	18/
32	2nd	" " "	12	30/	46	" " "	" " "	25	25/
33	2nd	" " "	12	40/	47	" " "	" " "	25	33/
34	2nd	" " "	12	50/	48	" " "	" " "	25	39/
35	2nd	" " "	12	60/	49	" " "	" " "	25	48/
36	2nd	" " "	12	72/					

FINE EGYPTIAN SPONGES ON STRINGS.

No.		On each string.	Per string.
50	Best Egyptian, 20 pieces on each string	...	6/
51	" " 20 " "	...	9/
52	" " 20 " "	...	14/
53	" " small 35 " "	...	6/

SANDED SPONGES (by weight).

Honey Comb	...	5/6 to 15/ per lb
Fine Turkey Toilet	...	10/ to 50/ "

R. CRESSWELL & Co., 32 Red Lion Square, London, W.C.



Sponges on Cards.

Sponges on Cards, as quoted below, have now a very large sale. Buyers are cautioned against inferior imitations of our goods. The Cards bearing our Trade Mark will be found vastly superior to all others in the following particulars, viz., value, appearance, and regularity of assortment.

The Cards can be supplied without prices on, for Export.



	Per doz. Cards.
Superior 1d. Honey-comb School, 1 doz. on card	7/
" 2d. " Toilet " " "	14/
" 3d. " " " " "	21/
" 4d. " " " " "	27/6
" 6d. " " " " "	21/
" 1s. " " " " "	42/
" 1s. 6d. " " " " "	63/
" 2s. " " " " "	84/
" 2s. 6d. " " " " "	105/
" 3s. " " " " "	84/
" 3s. 6d. " " " " "	100/
" 4s. " " " " "	112/
" 5s. " " " " "	105/
" 7s. 6d. " " " " "	157/6
" 10s. " " " " "	210/
" 2d. Pocket Slate Sponge and Label Damper (in handsome crystallized tin boxes, assorted colours) 1 doz. on card	14/
6d. Sanitary Turkey on bone handles, 1 doz. on card	42/

	Per doz. Cards
Superior 1d. Turkey School, 1 doz. on card	7/
" 2d. " Toilet " " "	14/
" 3d. " " " " "	21/
" 4d. " " " " "	27/
" 6d. " " " " "	42/
" 1s. " " " " "	84/
" 1s. 6d. " " " " "	63/
" 2s. " " " " "	84/
" 2s. 6d. " " " " "	105/
" 3s. " " " " "	84/
" 3s. 6d. " " " " "	100/
" 4s. " " " " "	112/
" 5s. " " " " "	136/
" 7s. 6d. " " " " "	212/
" 10s. " " " " "	272/
" 3d. Egyptian Toilet, 1 doz. on card	21/
" 4d. " " " " "	27/6
" 6d. " " " " "	42/
" 1s. " " " " "	84/
" 1s. 6d. " " " " "	63/
" 2s. " " " " "	84/
" 2s. 6d. " " " " "	105/

* * Special Discount off Carded Goods for large quantities.

Sandless Sponges (by Weight).

READY FOR USE.

HONEY-COMB SPONGES.

ASSORTED SIZES.

No.	Pieces to the lb.	Price per lb.
1 Finest selected Toilet and Bath shapes, of superior texture	about 25	35/
Special Bath shapes and sizes	7 to 12	32/ & 35/
2 Best Toilet shapes, fine and strong texture	about 25	25/
Special Bath shapes and sizes	7 to 12	28/
3 Ordinary Bath shapes, good and fine texture	about 18	17/
4 Good large Cuts, for Carriage, Household, and Stable use	" 16	14/
4A Superior Cuts for Bath & Toilet use	" 16	18/
5 Medium sizes for general cleaning purposes	" 40	12/
6 Sup. sml. shapes for Nursery use, &c.	" 72	13/

FINE TURKEY SPONGES.

ASSORTED SIZES.

No. Qty.	Pieces to the lb.	Price per lb.
1 Finest selected shapes and quality, about 50	120/ to 200/	
2 First quality, superior texture, good shapes	45 80/	100/
3 Second quality, ordinary shapes, fine texture	40 60/	80/
4 Ordinary quality and shapes	60 40/	60/
5 First quality, Flat saddle	10 to 15	40/
6 Second quality, Flat saddle	12 " 18	30/
7 First quality, fine Turkey Solids, about 45		50/
8 Second quality do.	60	40/
9 Fine Turkey pieces, good quality, 100 to 120		30/

May be had in handsome Blue Enamelled Cardboard Boxes of—

½ dozen at 4/ 5/ 6/ 7/ 8/ per box.

1 " 5/ 6/ 7/ 6/ 9/ 10/ 6/ 12/ 15/ 18/ per box.

Superior large Bath shape, in boxes containing 1 sponge at 4/ 4/ 6/ 5/ 5/ 6/ 6/ 7/ 8/ 9/ 10/ each.

TRADE MARK.



May be had in handsome Blue Enamelled Cardboard Boxes for the facility of buyers.

Boxes containing 1 dozen, at 4/ 6/ 8/ 10/ 12/ 18/ per box.

" ½ " 12/ 15/ 18/ 21/ 24/ per box.

And upwards to 120/ per box of half-a-dozen.

TERMS: 2½ PER CENT. DISCOUNT, 3 MONTHS NETT.

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VENDORS have the advantage of obtaining an opinion on Value derived from extensive experience, and are in most cases enabled to avoid an infinity of trouble by making a selection from a list of applicants for purchase, with the view of submitting confidential particulars to those alone who are most likely to possess business qualifications and adequate means for investment.

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2. LONDON, W.O.—Dispensing and Retail of good class, admitting of considerable increase; present returns £350 per annum; has been conducted by an assistant; is well suited for a branch; price £200.

3. LONDON, W.—Good-class Retail and Dispensing, with post office attached; returns nearly £800; profits above the average; large and convenient house; price £700.

4. LONDON, W.—First-class Retail and Dispensing; returns about £1,100 with large profits; handsomely fitted shop and good stock; large and convenient house; price to be arranged.

5. LONDON, N. (main road).—Very profitable Retail and Dispensing; returns nearly £400 yearly; good house; low rent; price about £400; good introduction will be given.

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YORKS.—Unopposed Retail with excellent prescribing; returns £1,000; price £700.

HANTS.—Light Retail with Prescribing and Dispensing; returns £600; good house on lease; rent £35; price £500.

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BUSINESSES WANTED. BUSINESSES FOR DISPOSAL.
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GLOUCESTER.—High-class Retail and Dispensing, situated in one of the best positions of fashionable town; returns £900; could be nearly doubled by an energetic man; at valuation, and no goodwill.

LONDON, W.—Light Retail; returns £500; price £230.

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**N.B.—NO CHARGE TO PURCHASERS OR TO
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Having had 25 years' experience in the Wholesale and Retail Trade, begs to offer his services as **VALUER OF STOCKS, &c.**, to those who may be changing businesses.

Address, 31 STEELHOUSE LANE BIRMINGHAM.

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PREMISES in one of the main thoroughfares in London to Let; first-class opportunity for Chemist and Druggist.

HOUSE and Shop to Let in the centre of village, where for many years a good business as Chemist and Druggist has been carried on; rent low. Apply, H. Margetts, Snettisham, Norfolk.

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PARTNERSHIP.—A gentleman with £200 can be received in a Business Agency connected with the Drug trade; previous knowledge not necessary; suit a young man wishing to avoid the examinations, or anyone desiring light occupation; good income certain; applicants must be prepared to furnish good references. "Veritas," 9 Miucing Lane, E.C.

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LIGHT Retail and Dispensing, S.E. district; good house and commanding shop; old-established; good opening for a surgeon. Address, W. R. S., care of Clark & Co., Auctioneers and House Agents, West Kensington.

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A GOOD CHEMIST'S BUSINESS to be sold, situated in one of the finest positions of the North of London, main road; long lease; established over 13 years; no agents need apply. Address by letter only, W., 274 Seven Sisters' Road, Finsbury Park, N.

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FOR DISPOSAL, the Drug and Seed Business carried on by Thomas Lockitt at 34 Market Place, Macclesfield, with dwelling-house containing eight rooms and large warehouse; position excellent and very central; an opportunity rarely to be met with; established by the present proprietor in 1856.

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GOOD Country Business; 30 years in Proprietor's hands, who wishes to retire from the trade; purchase, 1 year's returns, about £500; full prices maintained; excellent modern premises; lease or sale; anyone acquainted with photography might double return; strict investigation courted. Apply to W. Sharpe, Madeley, Salop.

BUSINESSES WANTED.

A GENUINE BUSINESS in country town, or Partnership with Chemist, or Chemist and Dentist; references given. Particulars, which will be treated confidentially, to be sent to Mr. Martin, Foster Street, Stourbridge.

BUSINESS WANTED.—Genuine Retail Country Business, or one at Seaside, returning from £900 to £1,200 at full prices; give full particulars, and lowest price for cash. Address, "Pharmacist," 7 Oxford Road, Ealing, London, W.

WANTED, a small Retail, open for improvement; suburbs (say within 7 or 8 miles of Charing Cross); moderate rent; comfortable house preferred to a large shop. Particulars to "Bismuth," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

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WANTED, a Man well acquainted with preparation of muriate of ammonia or sal ammoniac, and able to work the manufacture. Address M 100, *Manchester Guardian*.

DRUG AND DRYSALTERN.—Wanted, an Assistant for a rough business, in the Wholesale and Retail. Address, stating age, &c., to K. M., 54 Villiers Terrace, Leeds.

DRUG TRADE.—Wanted, an experienced Ledger Clerk; must have a thorough knowledge of the Drug trade. Apply, stating references, &c., to Goodall, Backhouse & Co., Leeds.

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RESPONSIBLE Situation Wanted; correspondence solicited. F. W. H., 52 Brook Street, Chester.

JUNIOR waits Engagement; 4½ years' experience; employer giving up business. Apply, 185/12, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

AUSTRALIA OR NEW ZEALAND.—Situation as Assistant to Homoeopathic Chemist; 10 years' experience; good knowledge of allopathic dispensing. 169/9, Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

BY TRAVELLER, with good connection, on South Coast or in Eastern Counties; good drug or sundry house preferred; would accept any other place of trust; thorough knowledge of French language; unexceptionable references and testimonials. C. C., 43 Lorn Road, Brixton, London, S.W.

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WHOLESALE.—Situation wanted, in Tincture room or otherwise; 7 years' experience; aged 25. L., care of Mr. H. Wallis, 4 Weston Place, Weston Street, Bermondsey.

TRAVELLER; many years' experience; Midlands, West, and Wales; can influence good connection; is well known to the customers; wishes to treat with a good Drug or Sundries Firm; excellent references. J., 42 Albert Street, Regent's Park, N.W.

JUNIOR or Improver.—Passed Preliminary; Certificate Practical and Theoretical Chemistry, South Kensington; twentieth year; 3½ years' experience in first-class business. B., 5 Park Row, Blackheath, London.

AS ASSISTANT or Manager; aged 35; married; good prescriber; can extract teeth; good references. C. W. B., 55 Branch Street, Barnley.

A PHARMACIST, for some time in the service of the N.S.W. Government, and with experience from the first English houses, wishes for a permanent position in one of the cities of Australia, either in a Pharmacy, Dispensary, or Hospital; has had some surgical experience as assistant on emigrant vessels; would be willing to undertake commissions for Sydney or Melbourne; will leave England for Australia early in February. Address, F. S. J., care of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C., or THE CHEMIST AND DRUGGIST OF AUSTRALASIA, Melbourne.

MISCELLANEOUS.

ALL APPLICANTS to H., 077/10, care of Messrs. Haasensteins & Vogler, Hamburg, are hereby informed that a Manager has been engaged.

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CAP. PAPA V. ANGLIC., 1885.

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CARMINE.—42 lbs. finest quality made, 24/ per pound; carmine, 60 lbs. No. 2, ditto 16/6; magenta crystals, 100 lbs. 5/6; Bismarck brown, 150 lbs. 2/6; carmine aniline, 30 lbs. 10/; blue aniline, 25 lbs. 8/; maroon ditto, 200 lbs. 2/9; gold bronze powder, 72 lbs. 8/; copper ditto, 50 lbs. 6/6; silver ditto, 45 lbs. 6/ per pound; carriage paid on amounts of 20/-; remittance can be forwarded after delivery and approval of goods. **Z. SCHAPMANN, Factor,** 22 Paradise Street, Finsbury Square, London, E.C.

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"**QUININE AND IRON TONIC.**"—(Like Pepper's.) An elegant preparation. Keeps well. Pleasant taking. Reliable action. Profitable.

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"**LIVER PILLS.**"—The most perfect combination with Podophyllin. Gentle action, but sure. Purely vegetable. Tonic and stomachic; also

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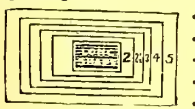




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MANUFACTURED BY WILLIAM MATHER,

Are manufactured of the same kind of ingredients as those sanctioned and ordered by Dr. Andrew Smith, Director-General of Her Majesty's Army and Navy Ordnance Medical Department, for the use of the Soldiers and Marines in Scutari Hospital.

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		Inches.	d.		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Heart Shape 	1	3 x 4½	1 size.	"	0 8	0 8	0 8	0 8	1 4	1 0
	2	4½ x 6	1½ "	"	1 0	1 0	1 0	1 0	2 0	1 6
	3	4½ x 7½	2 "	"	1 6	1 6	1 4	1 4	2 8	2 0
	3½	5½ x 7½	3 "	"	2 3	2 3	2 0	2 0	4 0	3 0
	4	6½ x 8½	4 "	"	3 0	3 0	2 8	2 8	5 4	4 0
	5	8 x 9½	6 "	"	4 6	4 6	4 0	4 0	8 0	6 0
Long Shape 	1	2½ x 4	1 "	"	0 8	0 8	0 8	0 8	1 4	1 0
	2	4½ x 6½	2 "	"	1 6	1 6	1 4	1 4	2 8	2 0
	2½	4½ x 8½	3 "	"	2 3	2 3	2 0	2 0	4 0	3 0
	3	5½ x 9½	4 "	"	3 0	3 0	2 8	2 8	5 4	4 0
	4	6½ x 11	6 "	"	4 6	4 6	4 0	4 0	8 0	6 0
	5	7½ x 14½	8 "	"	6 8	6 8	6 0	6 0	12 0	8 0
Oval Shape 	1	4½ x 6½	2 "	"	1 6	1 6	1 4	1 4	2 8	2 0
	2	6½ x 8½	4 "	"	3 0	3 0	2 8	2 8	5 4	4 0
	3	7½ x 9½	6 "	"	4 6	4 6	4 0	4 0	8 0	6 0
Saddle Shape 	1	6½ x 12½	6 "	"	4 6	4 6	4 0	4 0	8 0	6 0
	2	7 x 15	8 "	"	6 8	6 8	6 0	6 0	12 0	8 0
	3	8 x 16	12 "	"	8 8	8 8	8 0	8 0	15 6	12 0
Wrist 	1	3 x 10½	3 "	"	2 3	2 3	2 0	2 0
Knee 	2	4½ x 15	6 "	"	4 6	4 6	4 0	4 0

BREAST PLAISTERS.	No.	Size of Leather	Retail Prices.	Per doz.	PLAISTERS, SPREAD.—Prices per Dozen Yards.						
			d.	s. d.	16 Inches in width						
					NAME	Glazed Cloth	Un glazed Cloth	Linen	S. ans-down	Mole-skin	Skins of Leather
Emp. Plumbi, for Ladies' Breasts	1	Diam. 6½ in.	4 size	2 8	Emp. Adhasivum Opt. ..	4/0	5/6	12/0	12/0	21/0	4/0
Emp. Plumbi, for Ladies' Breasts ..	2	" 7½ "	6 "	4 0	" Adhasivum	3/6	..	..	..	36/0	5/6
ditto spread on Chamois ..	1	" 6½ "	.. "	4 0	" Ammon.c.Hydrarg ..	16/0	..	..	..	30/0	4/0
ditto ditto ..	2	" 7½ "	.. "	6 0	" Antim. Pot. Tart. ..	10/0	..	..	..	30/0	4/0
					" Belladonna	18/0	20/0	27/0	27/0	36/0	5/6
					" Calefaciens	11/0	12/0	15/0	15/0	24/0	4/6
					" Cerat Saponis	8/0	9/0	14/0	14/0	24/0	4/6
					" Dreadnought	9/0	10/0	14/0	14/0	24/0	4/6
					" Elemi	9/0	10/0	14/0	14/0	24/0	4/6
					" Ferri	9/0	10/0	14/0	14/0	24/0	4/6
					" Galbani	14/0	..	..	..	30/0	4/6
					" Hydrarg.	14/0	15/0	18/0	18/0	27/0	4/6
					" Iodine	16/0	..	..	..	30/0	5/6
					" Opil	18/0	20/0	27/0	27/0	36/0	5/6
					" Picis Co.	11/0	12/0	15/0	15/0	24/0	4/6
					" Plumbi	5/6	6/6	12/0	12/0	21/0	4/0
					" Potass. Iodid.	16/0	..	..	..	36/0	5/6
					" Resinæ	5/6	6/6	12/0	12/0	21/0	4/0
					" Roborans	6/0	7/0	12/0	12/0	21/0	4/0
					" Saponis Alb.	5/6	6/6	12/0	12/0	21/0	4/0

HOSPITAL PLAISTER, on Black Cloth, 16 in. wide, doz. yds. 8/0
 " " on White " " " 8/0
 Every other description of Plaster used in Pharmacy or Private Formulee spread on any material, to suit any climate.

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CARRIAGE ON "SUNDRIES."

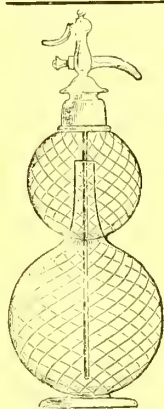
We have pleasure in stating that we first offered to pay carriage on £5 worth of "Sundries" in March, 1877. We continued to do so for nearly a year. Many of our friends who lived near London asked us to allow them 5 per cent. discount in lieu of Carriage, and many of those at a greater distance sent in so many enclosures, for which we had to debit proportion of Carriage, that we adopted the plan of allowing 5 per cent. discount on all orders of £5 worth of "Sundries."

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Orders amounting to less than £1 in value, for conveyance per Sutton & Co., Forster's Parcel Express Co., Globe Express Co., &c., will be charged with the Booking Fee of 2d. each package, charged by such carriers when we hand the parcels to them.

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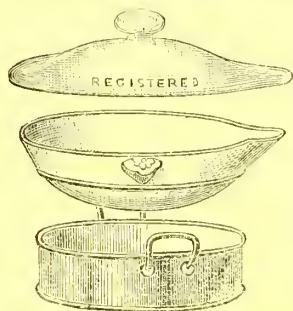
FEVRE'S SELTZOGENES.

	2 PINT.	3 PINT.	5 PINT.	8 PINT.
Caned, each	8/9	10/2	15/3	26/

	2 PINT.	3 PINT.	5 PINT.	8 PINT.
Wired, each	8/3	9/9	14/6	24/6

"MAY-ROBERTS" WATER BATH,

REGISTERED.



This Water Bath will supply a long-felt want amongst Chemists and Perfumers, where small quantities of materials have to be dealt with.

The old form of Water Bath necessitates the use of a second vessel for pouring the melted Pomade, Cream, or other substance into the bottles or jars in which they are sold. In the "MAY-ROBERTS" Water Bath the earthenware bowl can be lifted out of the tin containing the boiling water, the process of cooling being thereby very much expedited, and the contents can be poured into the bottles or jars direct from the bowl. The Bath is also supplied with an earthenware cover.

1 PINT.	5 PINT.	10 PINT.
Each 3/0	5/6	9/6

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EXCHANGE COLUMN.

TERMS.—Announcements are inserted in this column at the rate of one halfpenny per word, on condition that name and address are added. Name and address to be paid for. Price in figures counts as one word. If name and address are not included, one penny per word must be paid.

Drugs and Chemicals.

I have 4 or 5 bottles of Sym's musk left, price 21s. each, 2, 41s. Richardson, Alford.
13 lbs. pulv. cinchona pail, 4 lbs. pulv. myrrhæ turc., 5 lbs. ext. glycerhizæ liq.; offers, cash. Gant, Raunds.
Eleven 10-lb. tins Tomlinson's glycerine dip; rusty outside, otherwise right; 1s. 6d. each. Kemp, Horncastle.
About 2 cwt. small turkey gum sorts, cheap; 10 cwt. ground black pepper; offers wanted. Sowerby, Middlesbrough.
Gum benzoin, 1s. 3d. lb.; bismuth subnit., 7s. lb.; saffron (finest), 2s. 6d. oz.; potass iodid., 9s. lb.; carriage paid. J. C. Liugdale, Skelton, R.S.O.

Proprietary Articles.

Myers' cattle spice, for sale, cheap, or exchange. Graham, Chemist, Stockton, Durham.
Whelpston's pills, 5s. 1½d., 8s. 5½d., 22s., clean. E. Elmitt, Horncastle.
Myers' poultry spice, in 1s. packets, and Myers' pig powders, for sale or exchange. Weddell, Colchester.

Educational.

Two Squire's "Companions," 1882, new, and 1880; what offers? G. Cave, Epping.
Miller's "Organic Chemistry," 1880 edition, uncut; price 13s. 6d. Graham, Chemist, Stockton, Durham.
Diary, *Chemist and Druggist*, for 1886; I have three copies; can sell or take exchange for two. P. A. S., 72 Mansfield Road, N.W.
Preliminary and Bell Students.—Lot of second-hand hooks for disposal. For list write E. W., 128 Upper Fore Street, Edmonton, N.
Set of illegible autograph prescriptions (original) 2s. 6d., as presented to the Pharmaceutical Society of Ireland for their examinations; 30 prescriptions (catch and difficult) given to dispense at Minor during past 12 months, 2s.; 50 questions asked of successful students at last Minor, 1s. 1d.; new "Pharmacopœia," 5s.; lot of cheap, almost new, books; Attfield's "Chemistry," 1886, 12s.; Squire's "Companion," 1886, 8s. 6d.; carriage paid; stamp for list. Saunders, Medical Tutor, 6 Rochester Square, N.W.

Literature.

What offers? *Pharmaceutical Journal* posted Mondays. Address, "Delta," 15 Broad Street, Worcester.
Chemist and Druggist, 1873, 1874, 1875, 1877, 1879, 1880, 1884, 1885, complete, not bound; what offers? George, Aylsham, Norfolk.
Cassell's "Family Physician"; "Medical Information and Advice by a Physician"; what offers? clean. Douthley, Dorking.
Pharmaceutical Journal, posted day of publication, 7s. for current year. Heald, Burnham, Bucks.
Muspratt's "Dictionary of Chemistry," new edition, 8 divisions, perfectly clean, handsomely bound, price 31., cost 4 gns. 196/39.
Pharmaceutical Journal, 1874 to 1879; about fifty numbers; nine numbers *Chemist and Druggist*, lot 5s.; other medical books cheap. Wright, Chemist, Burnley.
Watts' "Dictionary of Chemistry," all the 9 vols., with 3rd supplement, published at 15s., 1879-1881, in condition almost equal to new, price 71.; a bargain. Miller, 102 Fortess Road, Kentish Town, N.W.

Some nice books on Pharmacy, Chemistry, Botany, Homœopathy, Medicine, and Surgery; returnable list for addressed envelope. Davis, jun., Chemist, 161 Seven Sisters' Road, Holloway, N.

Shop Fittings.

Two pear-shaped carboys, about 12 gal.; cut spiral stoppers, with mahogany stands; great bargain. Jeffery, Chemist, Bristol.
Two sets of 38 drawers each, mahogany faced, with gold labels, endboards underneath to match. Llewellyn, Cowbridge.
Special bargains.—50 counter cases, from 10s. each; 30 counters, from 25s. each; 300 shop drawers, with gold labels, from 2s. each. Lloyd Rayner, 197 City Road, E.C.
Several cases upright and flat globes, handsome tablets, ointment and extract jars, various sizes pill-machines, several oil-cisterns (about 100 gallons), and many other things; cheap. Heap, Chemist, Ashton-under-Lyne.
For immediate sale, the range of lockers, drug drawers, and imitation ditto, with cut-glass knobs, mahogany top, and shelves 20 ft. long; also retail counter, fitted complete. Apply, 3 Bell Yard, Temple Bar.

Second-hand Glass.—Specie jars and covers—

Two 23½ in. scrolls and plinths, 65s.; 2, 23 in. arms and stands, 65s.; 2, 25-in. scrolls, 60s.; 1, 31-in. scroll, glass cover, 35s.; carboys, cut stoppers—1, 16 gal., 40s.; 2, 14 gal., and stands, 31. 10s.; 3, 5 gal., 37s. 6d.; 2, 4 gal., and stands, 17s.; 3, 3 gal., 1, 2 gal., and stands, 27s. 6d.; 10½ doz. rounds, washed, no labels, and 47 mazarine blue pots, ditto, one-third discount off list; 1 pair drug-scales 10s., 1 pair 20s. Hawke & Son, London.

For Chemists.—Shop fittings; glass and panelled fronted counters; shop drawers, with and without glass labels; lockers, shelving and cornice above; bent, flat, upright counter cases; dispensing cases; screens; desks; sponge; centre show cases; handsome wall cases; window enclosures; shop doors; lamps; pill machines; tincture presses; scales; mortars and pestles; window carboys; specie and show jars, gold labelled; recess, engraved shop bottles, jars—pink, blue, olive, marone. The above are in all sizes and designs. The entire fixtures of several shops, great bargains. Lloyd Rayner, Showrooms, 197 City Road, E.C.

Nest 45 mahogany drawers, 6 ft. long, 80s.; nest 32 painted drawers, 6½ ft. long, with lockers, 55s.; nest 40 drawers, 7 ft. long, with 4 lockers, 70s.; nest 59 mahogany drawers, with 4 lockers; curved counter glass case, 32 in. long, 11. 15s.; flat ditto, 36 in. long, 21. 10s.; bent plate-glass counter-case, 46 in. long, 3 trays, 31.; flat ditto, 39 in. long, 21. 10s.; curved plate-glass counter-case, 42 in. long, Treble's, 21. 2s., imperfect; 2 upright ebonised glass cases, each 153 in. long, 32 in. high, 15 in. deep, each with 8 doors and spring catches, suitable for counter-fronts, 41. 10s. each; nest 28 shop-drawers, 21.; 20-oz. engraved acid bottles, 1s. each; set 22 4-lb. blue-labelled ointment-jars, 2s. 8d. each; quantity stoppered shop-bottles, all sizes, with and without gold labels; 2-gallon iron mortar and pestle, 12s. 6d.; 1-gallon ditto, 18s.; 1 pair 2-lb. French counter-scales, 12s.; 1 pair 4-lb. ditto, 15s. 6d. Simcock, 17 Guildford Street, Leeds.

Second-band Fittings.—Spanish mahogany counter, 19 ft., 171.; 9-ft. dispensing ditto and screen, 2 ft. 5 in. high, and tablet, 101.; mahogany-fronted dovetailed drug-drawers, cover-boards, grained lockers; 17 ft. 6 in., 2 nests, 74 and 14, imitation and aërated-water shelves, 81. 10s.; 14 ft. 5 in., 2 nests, 112, 101.; mahogany wall-case, sheet-glass sashes, fixed shelving, and grained cupboard under, 12 ft. 8 in. long, 8 ft. 10 in. high, 91.; counter-cases, as Maw's 4—48 in. long, 27 in. high, shelves, tablet, carving, 81.; plate-glass case, ebonised, 73 in. by 22½. 41. 10s.; counter-case, sloping flaps and tablet, 82 in. by 17 in., 21. 10s.; upright Spanish mahogany counter-case, 78 in. by 33 in., 51. 10s.; desk and case, 26 in., 21.; desk with brass rail, 30 in., 35s.; aërated-water fittings, 29 in., 30s.; 2 mahogany chairs, carved backs, 30s. Hawke & Son, Wild Court, Great Wild Street, London.

Three mahogany cases, each containing 2 stoppered bottles for acid and soda, 5½ by 3½ by 2½ inches each, 4s.; 2 mahogany cases, 2 stoppered bottles, 8½ by 9 by 4½ in., and 7 by 7 by 4 in., 5s. 6d.; leather case, stoppered bottle, 6 by 3 by 3, 2s.; medicine-chest, 7 stoppered bottles (1 deficient), drawer, weights, scales, lock, key, 7 by 6 by 3½ in., 15s.; mahogany medicine-chest, 10 stoppered bottles, measure, scales, drawer, lock, key, 7 by 5 by 3, 11.; mahogany chest, 6 stoppered bottles, drawer, lock, key, 7 by 5 by 3 in., 7s. 6d.; mahogany medicine-chest, 10 stoppered bottles, weights, scales, lock, key, 8 by 7 by 6 in., 11. 2s.; mahogany medicine-chest, 9 stoppered bottles, scales, drawer, lock, key, 7 by 8 by 4 in., 17s. 6d.; mahogany medicine-chest, 8 stoppered bottles, drawer, lock, key, 8 by 6 by 4, 15s.; mahogany medicine-chest, 7 stoppered bottles, drawer, scales, lock, key, 7 by 6 by 3, 16s.; mahogany medicine-chest, 8 stoppered bottles, measure, scales, drawer, lock, key, 7 by 6 by 4 in., 11.; mahogany medicine-chest, scales, drawer, lock, key, 7 bottles, 7 by 6 by 3 in., 15s.; mahogany medicine-chest, 6 stoppered bottles, lock, key, 6 by 8 by 3 in., 12s.; mahogany medicine-chest, 8 stoppered bottles, drawer, scales, lock, key, 7 by 9 by 3 in., 18s.; mahogany medicine-chest, 2-flap, 16 stoppered bottles, mortar, scales, drawer, lock, key, 9 by 9 by 5 in., 11. 10s.; mahogany case, 4 stoppered bottles, 5 by 6 by 3, 8s.; mahogany case, 4 stoppered bottles, 5 by 6 by 3 in., 7s. 6d.; leather case, 4 stoppered bottles, 5 by 6 by 3 in., 5s.; breast-pump, brass, Maw's, 5s.; 2 eye-douches, Maw's fig. 2, each 3s. 6d.; enema Schmidt's (Margate), mahogany, 12s. 6d.; enema, Maw's fig. 17, 12s.; enema, electro. Maw's (Kennedy's), 15s.; enema, brass, Clark's, 8s.; enema, brass, Savigny's, 7s.; enema, brass, Savigny's, 7s. 6d.; enema, Kennedy's, 5s.; enema, white metal, 4s. 6d.; 8 enemas, brass, each 4s.; enema, white metal, defective, 2s.; 2 enemas, brass, each 5s. 6d.; enema, brass, 7s. 6d.; enema, brass, 4s. 6d.; enema, Higginson's (Lynch's), 3s. 6d.; 6 acid-tubes, globe-reservoirs, each 5d.; 5 railway companions, leather cases, each 1s. 6d.; 3 8-oz. wide-mouthed stoppered bottles, b. w. case, each 2s.; 5 wide-mouthed stoppered bottles, b. w. case, each 2s.; 4-oz. wide-mouthed stoppered bottle, b. w. case, 1s. 6d.; 3-oz. narrow-mouthed stoppered bottle, b. w. case, 1s. 3d.; 5 b. wood cases, 3 compartments, each 1s. 3d.; 3 b. wood cases, 3 compartments, each 1s.; lever copying-press, 5s. Reece & Co., 168 Piccadilly W.

Formulae.

Constipation cure, this is warranted to have the desired effect; cough mixture (like Crocley's), cheaply made; glycerine jelly, clear as crystal; 2s. 6d. each. Lee, 10 Queen Street, Chesterfield.

Every Chemist should put up his own teething-powders; wherever introduced must sell, being equal in every way to those much advertised; 2s. 6d. Lee, 10 Queen Street, Chesterfield.

The following reliable recipes, 1s. each:—Areca and cherry tooth-pastes, liquid dentifrice, hair restorer, lupuline bitters, latest perfume and dentifrice, children's gripe water, &c.; send for list. Lee, 10 Queen Street, Chesterfield.

Glycerine jelly, an unequalled recipe, produces a bright jelly at little cost; pile powders, very effectual remedy; cherry tooth-paste, an elegant preparation, does not ferment; lavender-water, none better made; starch polish, gives a beautiful polish to linen, &c.; Churchill and Salisbury bouquets, both delicious perfumes; balsam anised, splendid cough mixture, suitable for children; worm syrup, an efficient vegetable remedy; Persian essence, a most lasting perfume; cold cream, an elegant, smooth, emollient cream; cod-liver oil emulsion, quite tasteless; marking-ink, indelible, never fades; teething powders, equal to any made; ess. bouquet, commands immense sale; pot-pouri, camphor balls, phosphorus paste cosmetic, glaze for tongues; all well-tried recipes; 1s. 6d. each, any 3 for 4s. "Chemist," Ramsden, Southgate, Wakefield.

Reliable Recipes, wanted daily, all guaranteed genuine, as supplied to over 1,000 chemists at home and abroad; particulars of any on application; detailed list of 300, post free. Notemy advertisements these last four years in this Journal. "Satisfaction guaranteed." All communications are strictly confidential, or I could give over 500 testimonials.—*See addt. on p. 54.* "Entirely New Remedy for Toothache," gives instant ease, not injurious to other teeth; "Nigerine," jet-black, water-proof patent blacking, cheaper, sweeter and better than Nubian; "Digestive Relish," best and cheapest sauce in creation, from 3s. gallon; "White Oils," perfectly and permanently inseparable, equal to Elliman's snow white; "Lactussine," perfection of cough mixtures, nice appearance, very effectual, inexpensive; "Cod Liver Oil Emulsion with Hypophosphites" inseparable, pleasant taking, equals Scott's "Bronch-elixer" (Brompton Hospital recipe), concentrated form, rapidly cures all bronchial affections; "Lavender Water," superb fragrance, lasting, equals Sainsbury's; "Occasional Pills" (for ladies), most reliable, preferred to Widow Welch's; "Essence for Deafness," simple and effectual. Price 1s. 1d. each, 3 for 2s. 6d., 25 for 1l., post free, with full particulars for making, &c., by T. Brooks, Chemist, Louth, Lincs.

Miscellaneous.

Quantity clean 5-gall. iron drums, 2s. 4d. each. Kemp, Horncastle.

Rippingill stove, cost 25s., take 10s.; quite new, or exchange to 15s. Pattinson, Barnard Castle.

Twelve-cell Halse's medical galvanic battery, in good condition; when new cost 10 guineas; a bargain; what offers? 185/11.

Assortment of patents and packet goods, clean; list sent on application. Kemp, Alford, Lincolnshire.

Samples gum acacia, with price; offers for Chemist and Druggist, 1884 and 1885, Journal, 1882. Rayson, Chemist, Nottingham.

Pulvermacher's chain battery in case, only used twice; cost 4 guineas, take 25s. Lea, Harbour Street, Folkestone.

Safe (massive wrought iron), with shelf, two drawers, Chubb's lock, duplicate keys, 6l. W. Butcher, Chemist, Blackheath, S.E.

Carboys, pear-shaped, three 3-gal., 15s., and five 2-gal., 15s.; vulcaniser wanted. Waddington, Chemist, Thornton, Bradford.

Patents (various) half-price; chlorodyne, 5s. lb.; opium, Turkey, 10s. lb.; quin. sulph. (H. & S.), 3s. 3d. oz., and some others cheap; also fittings; lists sent. 199/37.

Boxing gloves, orchestronette, novels, conjuring chest, magic lantern, and other articles for sale or exchange. Barry, Chemist, Shaftesbury.

A splendid-toned violin, over 200 years in the family; good condition; price 5l. 5s. R. Winter, Chemist, Green Street, South Shields.

Cigar-case, as Maw's illustrated list, fig. A 33, price 50s.; glass displacement apparatus, ½ gall., price 13s. Graham, Chemist, Stookton, Durham.

Seed mill (good), height from hopper to floor 56 in., fly wheel 33 in.; worth 3l., price 18s.; also 6 4-gall. show carboys, splendid colours, 5s. each. Gibson, Gooch Street, Birmingham.

20 lbs. opium Turkey, hard, fit for tincture, 10s. lb.; 4 Winchester's ess. limonis, super., 4s. 6d. lb.; 4 hottles otto rose virg., 25s. oz.; sample of opium to be paid for. A. Jones, 10 Piercefield Street, Haverstock Hill, N.W.

Lady's gold ring, 18 carat, half hoop, diamonds, cost 8l.; also plain gold bracelet, 15 carat, handsome case, ½ in. width, weighs over ½ oz., cost 4l. 8s.; both almost new; cash offers. 190/32.

A beautiful collection of materia medica (more than 800 specimens), in special hottles and labelled; price for same 35l.; the whole collection is exhibited in two oak cabinets. A. Delaere, Pharmacien, Brussels.

For sale or exchange, Myers' royal cattle spice, in quantities of 1 cwt., open to an offer for about 1 ton; also about 80 lbs. of Myers' game and poultry spice, in 2-lb. packets. Address, P. A. Stevens, 72 Mansfield Road, Gospel Oak, London, N.W.

One 2-gall. tin still, been used for aq. lavand. and water only, price 21s.; 4, 60-gall. oil-cisterns, in good condition, with brass taps, cost 50s. each new, price for the lot 2l. 16s.; 2, 4-gall. pear-shaped window globes, 1, 2 gall. pear-shaped window globes, nearly new, in perfect condition, price for lot 27s. William Davies, Wholesale Druggist, Lec Street, Oldham.

The last 6 lbs. Taylor's lint, 12s.; 3 doz. zylonite tooth combs, 5s.; 2 doz. large ditto, 7s.; 8 oz. ol. santal flav. ang., 9s.; 8 oz. ol. mentha pip. ang., 15s. doz.; Stedman's powders, 6s.; 8 oz. ol. amygd. essent. ang., 10s.; 12 oz. Johnson's nitrate silver, 38s.; Gibson's show-case for lozenges, 5s.; cash or exchange; surplus stock bought or exchanged. Jones, Chemist, 69 Essex Road, Islington, London.

Offers or exchange, one lot or separate, 6-gall. Lipscombe filter, in good condition; also 1-gall. ditto; ½-gall. water bath, with condenser attached, gas stove to match, which can be used as an odorator; ½-gall. tin percolator, with patent pressure arrangement; gas shop stove, without dome; any on approval if necessary. E. Hall, 40 Bath Street, Leamington Spa.

Austin's half-guinea inhalers in blue, green, ruby, or white glass, nickel-plated fittings; having purchased the whole of the above stock from the executors of the late J. Battle Austin, I have several gross to dispose of at 20c. per doz.; show cards free; also about 500 1-lb. bottles pure carbolic acid crystals, at 14s. per single doz., 2 doz. 25s.; also about 100 gross 6d. boxes Austin's Fumigateur de Paris et de Bruxelles Sanatif, at 18s. per gross, in handsome boxes of 1 doz. each. Proprietor of The Bristol and West of England Homeopathic Medicine Supply, 37 High Street, Bristol.

Binocular microscope, in excellent condition, by Smith and Beck, in mahogany case, with lock and key; comprises 4 objectives—2 in., 1 in., ½ in., and ¼ in.; 2 pairs of eye-pieces, polariscope complete; light condenser for high powers; ditto on stand for opaque objects; parabolic reflector, camera lucida, live box, &c.; revolving stage with sliding object holder, and another with rectangular rack and pinion motion; a very complete instrument, all for 12l. 10s., about half cost-price. Miller, 102 Fortress Road, Kentish Town, N.W. Also for disposal a very beautiful lot of stained and mounted pathological objects.

Surplus Sundries from stocktaking, all guaranteed in perfect condition:—4 grs. 1½-oz. vials for 15s.; 3 grs. 1-oz. stoppered lubins, 16s. 6d. grs.; 13 doz. bent feeders, black fittings, 2s. 3d. doz.; 10 doz. flint ditto, 2s. 4d. doz.; 1 grs. black teats, 5s.; 7 lbs. black tubing, 7s. lb.; 18 30-oz. blue syrup (plug) bottles for 14s.; 24 30-oz. oil bottles, 1s. 8d. each; 5 grs. 8-oz. dispensing hottles, 7s. grs.; 3 grs. 1d. furniture cream hottles, 2s. grs.; 400 7-in. filtering papers for 2s.; 300 8-in. for 2s.; 300 11-in. for 2s. 6d.; 200 12-in. for 2s.; 1 grs. 3-oz. wood-capped pomade bottles, 12s. 6d.; 1 doz. Higginson's enemas, complete, 24s.; 2-oz. deep-nested willow boxes, 2s. 9d. grs.; 4-oz. verified measures, 12s. doz.; cork presser, 9d.; 1 ream white demy, 4s. Simcock, 17 Guildford Street, Leeds.

WANTED.

Dr. Quain's. Price to Doubleday, Dorking. Composition mortar, 10 or 13 pints. Weddell, Colchester.

No. 12, or little larger, composition mortar, second-hand. Jouis, Chemist, Treherbert. Human skull or skeleton complete; state lowest price. 185/13.

Large compo or marble mortar; must be sound and clean. 186/21.

Entire fittings, drawers, cases, &c.; Manchester; must be in good condition; 16 by 14; send full particulars. 186/20.

Quantity of good spectacles, in exchange for first-class musical-box, fancy costumes, wigs, &c. Kay, Chemist, Crewe.

A 3-grain pill-machine and pill-piper or Cocking's pill-machine; state lowest price. Evans 367 Moreley Road, Birmingham.

"Year-book Pharmacy," 1883, 1884, 1885; several 40-gall. oil-cisterns. E. Woolridge, Cradley Heath.

"Dirty Boy," in terra cotta—state height; also 2 Pears' circular glass stands complete, with artificial soaps; carriage paid. Offers to J. Eastman, Chemist, Tottenham.

That part of the *Chemist and Druggist's* Diary for 1885 which is printed on pink paper; 2s. 6d. will be given. A. J. Penn, 136 Great Portland Street, W.

Shop-fittings—counter, 10 ft., with 5 ft. 6 in. return; 10-ft. window enclosure; 6-ft. upright counter-case; 3-ft. counter-case, as Maw's A. 4. C. Warburton, Chemist, Farnworth, Bolton.

Myers' cattle spice, good condition; pill-machine; Diary, containing patent medicine formulae; glass jars for showing sponges; surplus patents, drugs, &c.; particulars and price. Howson, Hindpool, Barrow-in-Furness.

African hair restorer, Boyer's Eau des Carnes, Congreve's elixir, Liguam's drops, anti-fat, Blair's pills, any surplus patents, Batchelor's hair colour restorer. Mickle, Chemist, Liverpool.

Large compo mortar, dark-blue syrup-bottles, glass-capped oils, burnt acids, 8-oz. essential oils, labels (good), small dispensing-counter, shelving, glass-capped jars, drawers, glass labels and knobs; must be cheap; cash, or exchange for patents, cubets, Maw's feeders, sundries; glycerine balm; price advanced. Fowler, Chemist, Portsea.

Addresses & Information Wanted.

Mr. Masou, school usher, late of Dane Hill House, Margate. All expenses of correspondence will be paid by W. S. Harvey, Margate.

1886. TWENTIETH SEASON.

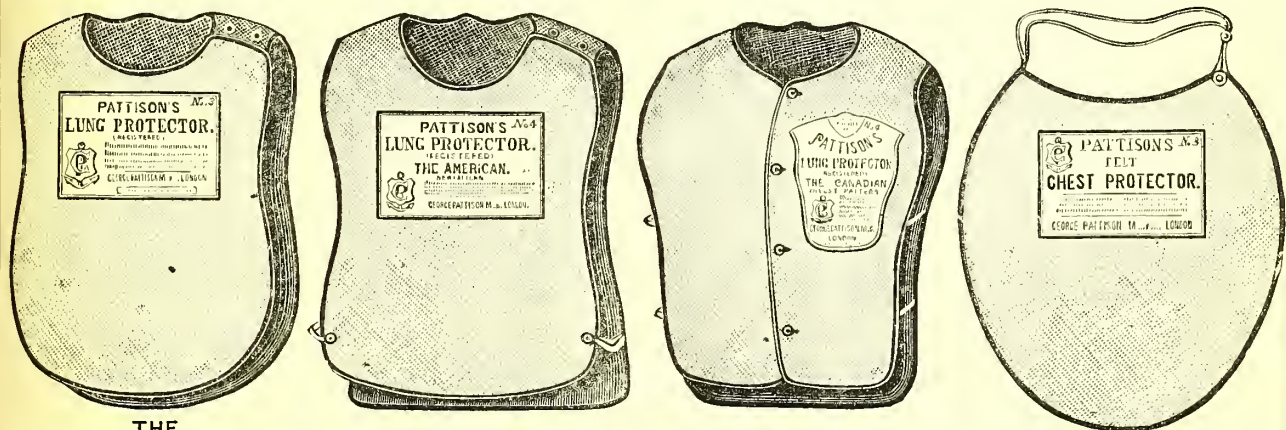
THE LUNG PROTECTOR

(REGISTERED).

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LUNG
PROTECTOR
TRADE MARK

"An Article of Acknowledged Excellence."

The "LUNG PROTECTOR" continues to be made only from the same Fine Soft Wool which has always been used since its introduction 19 years ago. Chemists are cautioned against the coarse and inferior imitations that are pushed upon them, the sale of which can only lead to ultimate loss of trade.



THE
LUNG PROTECTOR.
ORIGINAL PATTERN.

LUNG PROTECTOR.
THE AMERICAN.

LUNG PROTECTOR.
THE CANADIAN.

CHEST PROTECTOR.

PRICES :

	No. 0	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	
Original Pattern, Seven sizes	14/-	18/-	26/-	34/-	42/-	52/-	60/-	per doz.
The American, Six sizes	20/-	28/-	36/-	44/-	54/-	62/-	70/-	"
The Canadian, Six sizes	22/-	30/-	40/-	50/-	60/-	70/-	80/-	"

FELT CHEST PROTECTORS.

	No. 00	No. 0	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6	
Prices... ..	4/-	6/-	8/-	10/-	12/-	16/-	20/-	24/-	per doz.

All in Scarlet and White, and made in same Wool as the "Lung Protector."

Terms : All Wholesale Houses either allow a large Discount for Cash, or quote the goods at Reduced Net Cash prices.

FELT CHEST PROTECTORS, C QUALITY, single and double, each in five sizes.

At lower prices than above, and equal to **BEST** of other makers, but are not recommended.

GEORGE PATTISON,

INVENTOR AND MANUFACTURER,

139 ST. JOHN STREET ROAD, LONDON, E.C.

NOTICE ! 66 PENTONVILLE ROAD, N. SOLE ADDRESS.
LEMAITRE & CO.

(ESTABLISHED 1830),

£50
COMPLETE FITTINGS
FOR
CHEMISTS' SHOPS.

**MEDICAL AND GENERAL
SHOP FITTERS,
WRITERS, DECORATORS, &c.**
SEND FOR OUR ILLUSTRATED LISTS.
Best Manufacture and Seasoned Wood.

£100
COMPLETE FITTINGS
FOR
CHEMISTS' SHOPS.

NOTICE FOR REFERENCES.

J. JAMES, Thayer Street, W.; New Cross Road; Upper Tulse Hill, Brixton, and 260 Upper St., Islington.
Mr. DADSON, Romford Road, Manor Park.
Mr. JONES, 2 shops, New Wandsworth.
Mr. TRICK, Green Lanes; Ferme Park, Stroud Green; and 6 Abney Park Terrace.
Mr. TYLER, Victoria Parade, Felixstowe.
Mr. TRUNDLE, Barking Road.
Mr. STARK, Reswick Terrace, Lower Tooting.
Mr. FORBES, Reigate.
Mr. MEACHER, Ferme Park, Finsbury Park.
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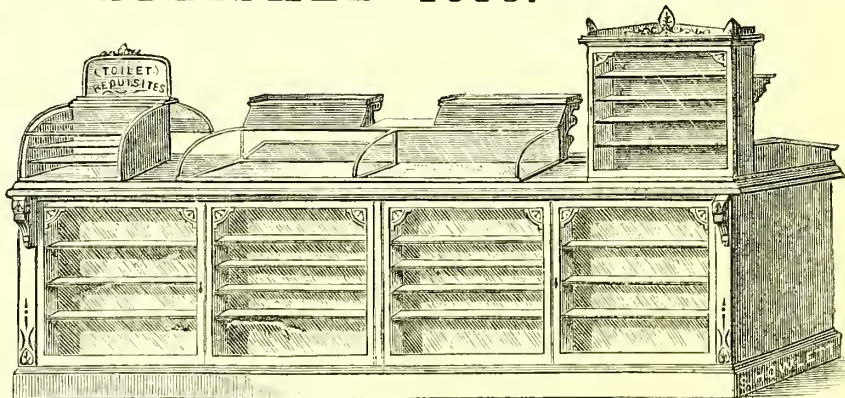
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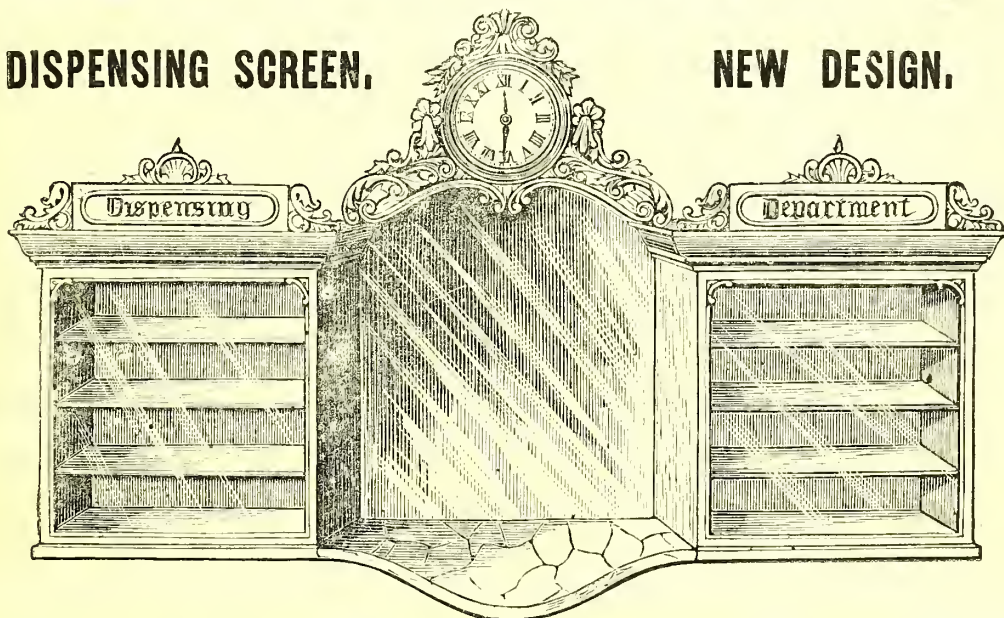
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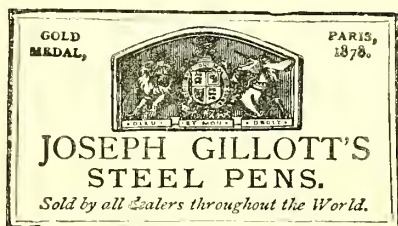
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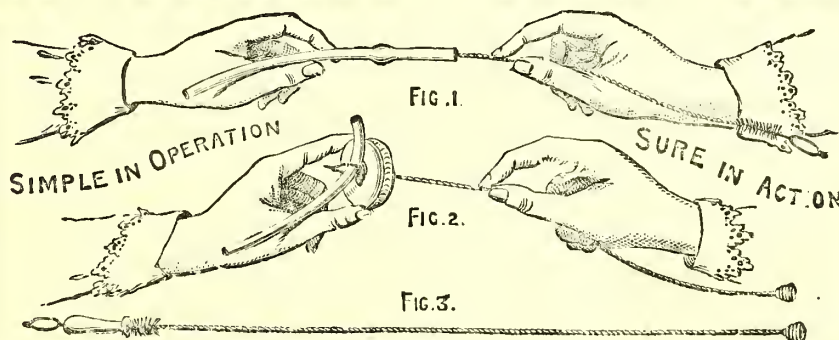
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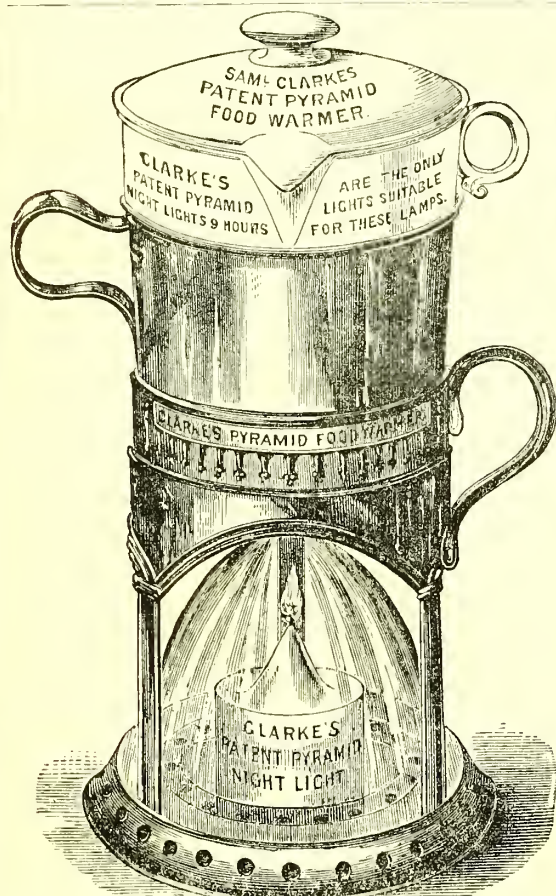
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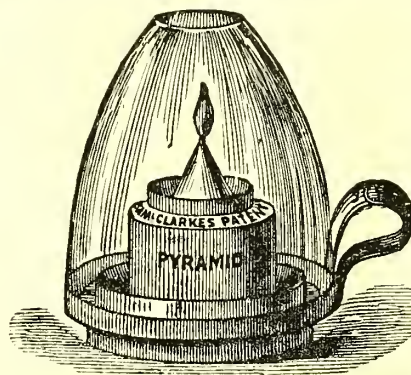
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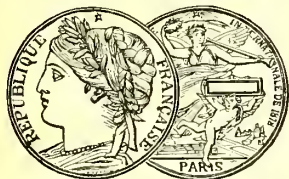
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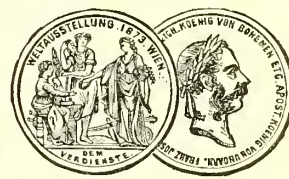


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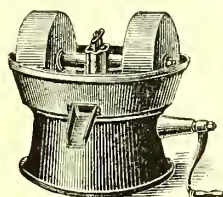
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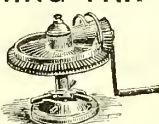


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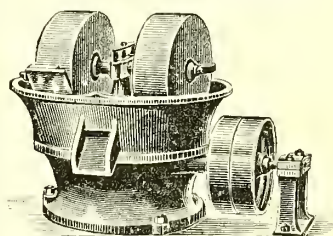


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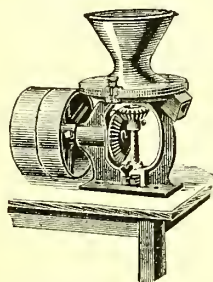
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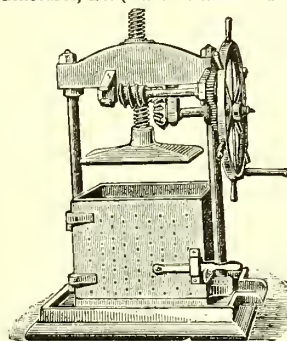
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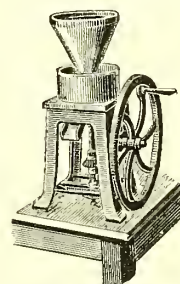
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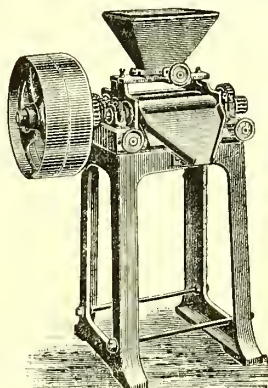
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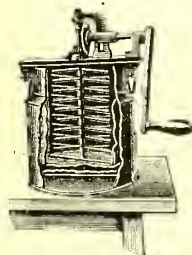
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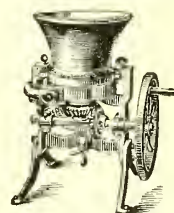
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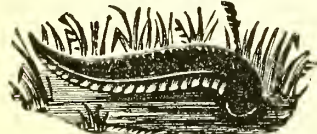
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BATH GLOVES, ENEMAS, ETC. LATEST REDUCED PRICES.

Post free to Chemists only on receipt of Trade Card.

JOHN CENTRETON,
24 NILE STREET CITY ROAD, LONDON, N.

W. KEMP & SON, HORNCASTLE.

DEAR SIR,

We direct attention to the exceedingly fine quality of our No. 1 BEST LIGHT CRUSHED LINSEED, containing all the Oil.

It is crushed from a special growth of Linseed, which being extremely fine and bold, and at the same time having an exceedingly thin skin, gives when crushed a very large proportion of Meal to Husk.

We guarantee it to be strictly Pure, and cannot be too emphatic in stating this. All particles of dirt, grit, foreign seeds, &c., are carefully removed, and our increasing sales show that our care in this respect is appreciated. Nothing better can be obtained.

It is lightly crushed, and will keep far longer than when heavily crushed and bruised, as in this case, the Oil being partially pressed out, the sample is darker, and will not keep so well. Applications for samples invited. Always esteeming your orders,

W. KEMP & SON.

No. 1.—BEST LIGHT CRUSHED LINSEED, containing all the Oil, guaranteed strictly pure. 18/6 per cwt. Bag free.

LONDON AGENTS—

MESSRS. BARCLAY & SONS, 95 Farringdon Street,
*Who hold Stock and supply 1 cwt. at above price,
and smaller lots at 20/- per cwt.*

Special Quotations for quantity. Ordinary Crushed Linseed at lowest market prices. Samples free.

GENUINE OIL OF MUSTARD SEED

Is strongly recommended as a safe and effectual remedy in cases of Rheumatism, Gout, Rheumatic Gout, Sciatica, Lumbago, Headache, Pains in the Stomach, Spasms, Bruises, Chilblains, &c. *Retail in Bottles, 1s. each.*

Imported by **J. H. & S. JOHNSON, Wholesale Druggists,**
6, 8, & 10 WHITECHAPEL, AND 7 CHURCH STREET, LIVERPOOL.

THREE
GOLD
MEDALS.

The Leading Article for Waterproofing, Softening, and Preserving BOOTS, LEGGINGS, HARNESS, MACHINE BELTING, FIRE HOSE, &c.

DALES' GOLD MEDAL PORPOISE OIL DUBBIN

Does not prevent the boots hacking. Free from unpleasant odour. Makes leather goods wear three times longer than ordinarily. Sells well and pleases the buyer. Put up in superior style in tins, 2d., 6d., 1s., and 2s. 6d. (No retail price on tins. Special tins for export.) Show Cards, &c., supplied; also Handsome Show Cases for first orders for 50s. For further particulars see page 64 in 1885 Diary. **WHOLESALE AGENTS WANTED.**

HIGHEST AWARDS **JOHN T. DALE, 287 Crystal Palace Road, LONDON, S.E.**

ALEXANDER & JOHN SHAW,
GRANTHAM, ENGLAND,
MANUFACTURERS OF THE WELL-KNOWN

CHAMOIS LEATHER,
PLASTER SKINS, AND WHITE SPLITS FOR PERFUMERY CAPPING.

These Goods are of the choicest quality, and specially prepared for the Drug Trade.

HYDROLEINE

The Marvellous Cleanser and Disinfectant.

WHAT THE MEDICAL PRESS SAY OF HYDROLEINE:—

“THE BRITISH MEDICAL JOURNAL,” Nov. 28th, 1885, p. 1,023, says:—

“The preparations of Hydroleine Disinfectants, just issued, seem to us to be of much importance, and to merit more than a passing notice. It is impossible to give a positive opinion without a prolonged trial extending over some months, but we entertain no doubt that they will soon come largely into use, and that they will in time rank as general favourites. The plan of supplying them in small boxes and tins, which can be purchased by the poor for a few pence, is certainly worthy of recognition. The Laundry Powder is especially valuable and cannot fail to be fully appreciated; whilst the Disinfecting Powders and Preparations for cleaning Brushes and Sponges are most useful. We have been much pleased with the results of our examination, and have much pleasure in recommending a trial of Hydroleine.”

“THE LONDON MEDICAL RECORD,” Dec. 15th, 1885, p. 536; Edited by ERNEST HART, Esq.,
Chairman of the National Health Society.

The new Hydroleine (Hydrated Soap Powder) is of considerable value for cleansing purposes, and is well adapted for use in the Laundry. It dissolves readily, forming a solution which lathers freely. It is useful for washing floors, tiles, marble, glass, and delicate articles where the use of soap would hardly be admissible. For horses, dogs, sheep, and other animals, it is an excellent application, keeping them clean without trouble. An analogous preparation is the Hydroleine Carbolised Soap Powder, which is sold at a very moderate price, and is a powerful disinfectant. There are other Powders, intended for cleansing and reviving carpets, and for washing sponges and brushes. We have tried them all, and have no hesitation in saying that they are most efficacious. These Hydroleine Compounds are thoroughly reliable, and will come speedily into general use.

The following is a List of the Company's Manufactures:—

HYDROLEINE—Hydrated Soap Powder (Carbolized).

Specially prepared with refined Carbolic Acid, for Cleansing Bedrooms, Domestic Offices, &c., as a preventative of disease. In $\frac{1}{2}$ -lb. and 1-lb. Tins, at 4d. and 6d. each.

HYDROLEINE SANITARY DISINFECTING POWDER.

The Latest, Purest, and Most Powerful Disinfectant known. In Tins, 3d., 6d., and 1s. each.

HYDROLEINE CARPET CLEANSER AND REVIVER.

A novel preparation for Cleansing Carpets, &c., and reviving the colours. In Tins, 6d. each.

HYDROLEINE BRUSH AND SPONGE POWDER.

For Cleansing Brushes and Sponges. In Tins, 6d. each.

The Company are also Manufacturers of the following Specialities:—

HYDROLEINE (Hydrated Soap Powder) is supplied in $\frac{1}{4}$ -lb. (1d) tin-foil packets (with attractive labels) packed in 14-lb. boxes. The packets are also put up in parcels of a dozen, in 1-cwt. cases. It is also supplied in 2, 4, 7, and 14 lb. linen bags for larger consumers.

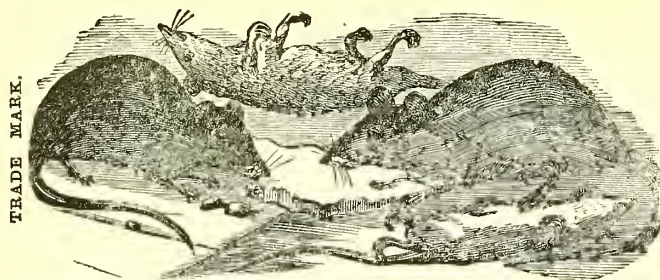
HYDROLEINE—For use in Laundries is supplied in casks holding 2 cwt., at 18s. per cwt.

N.B.—The whole of the above Preparations are handsomely got up, and form an attractive feature to any Establishment. Samples of all or any of the Company's Manufactures will be forwarded, carriage free, together with list of prices and trade discounts, on application to

F. J. HARRISON & CO., LIMITED,

Watling Street Works, Watling Street, Leicester,

Or of the Sole London Agent, H. B. JOHNSON (Barrett's Corner), SOUTH LAMBETH ROAD, S.W.

BATTLE'S VERMIN KILLER. { Mice eat it readily, and
Die on the spot.

Has an immense Sale, and wherever introduced never fails to give satisfaction.—Mice appear attracted to it as by magic, eat it readily, tumble over, and die on the spot. Rats usually die in their runs.—Parties troubled with Vermin may be cleared at once, either from Stacks, Houses, or Ships.

TESTIMONIALS.—*Thousands might be published.*
From Mr. THOMAS COLTON, Agent for Selby.—A friend of mine purchased a Packet of your VERMIN KILLER last night, doubting its efficacy; so-day he called in to say that he had found fifteen dead mice, and had only used part of a packet.—From Mr. EDWARD STURDY, Flemington Mills.—I duly received by post the Packet of your VERMIN KILLER, and found it as represented in your advertisement. It speedily destroyed all the mice in my granary. I enclose 2s. for two more Packets.—Leeds, November 6th, 1885.—I have tried BATTLE'S VERMIN KILLER, and have found it most effectual in clearing my premises of LARGE QUANTITIES OF RATS.—THOMAS S. CROSLAND.—Mr. Stead.

Sold in Packets, 3d., 6d., and 1s. each.

SOLE PROPRIETOR:

Mr. J. R. BATTLE, Chemist, Lincoln, England.

No Chemist or Storekeeper should be without a supply.

H. NEWTON & CO.,

MANUFACTURERS AND EXPORTERS OF

PHOTOGRAPHIC APPARATUS AND CHEMICALS,

5 SOUTH JOHN STREET, LIVERPOOL, ENGLAND.

NEWTON'S NEW "ORTHOPANACTNIC" LENS, acknowledged to be the most perfect Lens made, for Landscapes, Portraits, Architecture, Groups, and Copying. Cash returned, if Lens is not perfectly satisfactory.

NEWTON'S NEW PORTABLE CAMERA, being the lightest, strongest, and most convenient Camera in the market, from 3 inches to 17 inches focus, rack adjustment, rising and falling front, swing back, &c. Price, with 3 double dark slides, £8 8s.

NEWTON'S "MULTUM-IN-PARVO" TRIPOD STAND (Sharp's Patent), simply marvellous, packs into small sliding case, 5 x 5 x 2 inches, when erected will support a weight of 56 lbs. Price 25s.

NEWTON'S NEW WASHING APPARATUS, will remove every trace of Hypo from a dozen plates or 100 prints in an hour, constructed on an entirely new principle. Prices, $\frac{1}{2}$, 15s.; $\frac{1}{2}$, 21s.

NEWTON'S NEW HEADREST for AMATEURS, can be attached to any chair. Nickel plated, handsome in appearance, and very portable. Price 12s. 6d.

NEWTON'S "TOURIST" OUTFIT, comprising handsome Mahogany Bellows-body Camera, Achromatic Lens, and Folding Tripod Stand, for plates $6\frac{1}{2} \times 4\frac{1}{2}$, 45s.; ditto for plates $4\frac{1}{2} \times 3\frac{1}{2}$, 31s. 6d.

NEWTON'S "TOURIST" RUBY LAMP, very portable, for Bicyclists, &c., folds into one inch. Price 3s.

NEWTON'S PERFECTION DRY PLATES are unequalled for rapidity and general excellence. $\frac{1}{2}$, 1s. 6d.; $\frac{1}{2}$, 3s. 6d. doz

All articles connected with Photography at **LOWEST POSSIBLE PRICES** consistent with high-class work. All the Latest Novelties.

H. NEWTON & CO., 5 SOUTH JOHN STREET, LIVERPOOL.
N.B.—Wholesale Terms on application.

BETTS & CO. LIMITED

(ESTABLISHED IN 1840),

SOLE MAKERS IN GREAT BRITAIN OF

METALLIC CAPSULES,

AND PATENTEES OF THE

COLOURED SIDE MARK, LABEL, AND OTHER SPECIALITY CAPSULES

(For the Prevention of Fraud and Refilling of Old Labelled Bottles), as supplied to Bass & Co., and the leading Brewers and Bottlers of Wines and Spirits throughout Europe.

PLAIN ORDINARY CAPSULES,

For Small Phials, 2s. 6d. and upwards per 1,000, according to size, style, design, and quantity.

SPECIAL CONTRACTS FOR CONTINUOUS DEALING.

Manufacturers of Pure English-made Bottling and Package Tinfoil, from 1s. per lb. and upwards; Mixed Foil (Foreign Quality), from 6d. per lb. (according to gauge); Patent Barrel Packages and Snuff Canisters, &c.

MANUFACTORIES:—LONDON: Chief Office and Factories, Wharf Road, City Road, E.C.; and Holloway and Batavia Mills, Holloway, N.W.—BIRMINGHAM: Moor Green Fields.—PARIS: Office, 4 Rue Mogador, Chaussée D'Antin.—BORDEAUX: Office, 3 Quai de Chartrons; Factory, Montrépos, Floirac.

PATENTEES OF HYDRAULIC & MECHANICAL PRESSURE CAPSULING MACHINES,

ESPECIALLY ADAPTED FOR CHEMISTS' COUNTERS.

Largely in use by the Trade, and efficiency guaranteed for all sizes of Bottles, at Royalties from 5s. to £2 2s. per annum.

CRAWSHAW'S
CRYSTAL

DYES.

BROWN
VIOLET
MAGENTA
PUCE
CRIMSON
BLUE
MAUVE
MAROON
PURPLE
LAVENDER
ORANGE
CARDINAL
SLATE
YELLOW
BLACK
REVIVER
GREEN
PONCEAU
SCARLET
PINK
CLARET
CERISE

TRADE

MARK.



ROSE
CANARY
GREY
CAMBRIDGE
BLUE
OXFORD BLUE
NAVY BLUE
DARK BLUE
LIGHT BLUE
RED
SULTAN RED
PRIMROSE
PEACH
BLOSSOM
RUBY
LILAC
DARK BROWN
LIGHT do.
DARK GREEN
BUFF
PLUM
DRAB

THESE Dyes are specially manufactured for the purpose of affording to heads of families and others the means of Dyeing at home, for a small cost, Faded Articles of Wearing Apparel, &c. Silks, Ribbons, Feathers, Woollen Goods and Stuffs of all descriptions take the Dye readily. They are easy to use; they are economical in price. The colours are beautiful and brilliant, and anything can be dyed with them in a few minutes. One Sixpenny Packet of the Crystals will go as far as six Sixpenny bottles of the ordinary Liquid Dyes. Each colour will produce any desired shade of its own colour, according to the quantity used. There is sufficient in a Sixpenny Packet to Dye a Lady's Dress, or half-a-dozen Children's Frocks, or 100 yards of Ribbon, &c., &c.

Chemists who have not yet tried these Dyes will find it to their advantage to do so. There is no loss or mess from leakage, and their great utility and superiority has been readily proved wherever they have been tried.

NOTE.—NEW LINE FOR EXPORT.—Our Shilling size of Crystal Dyes are now put up in Bottles instead of Cardboard Boxes, as formerly. This change, we venture to think, will be fully appreciated by our numerous friends abroad.

			Per Gross.
1s. Bottles Crawshaw's Crystal Dyes.	In Boxes of 1 doz.	96/	
6d. Boxes Crawshaw's Crystal Dyes.	In $\frac{1}{2}$ gross (7 doz.)	48/	
Counter Case with Glass Lid	.. .. .	48/	
6d. Boxes Crawshaw's Crystal Dyes.	In Boxes of 1 doz. (14)	48/	
3d. Packets Crawshaw's Useful Dyes.	In $\frac{1}{2}$ gross Card-board Boxes	21/	
3d. Packets Crawshaw's Useful Dyes.	Mounted on Cards of $\frac{1}{2}$ gross	21/	
2d. Packets Crawshaw's Useful Dyes.	In $\frac{1}{2}$ gross Card-board Boxes	14/	
2d. Packets Crawshaw's Useful Dyes.	Mounted on Cards of $\frac{1}{2}$ gross	14/	
1d. Packets Crawshaw's Useful Dyes.	In 3 gross Counter Case with Glass Lid	7/	
1d. Packets Crawshaw's Useful Dyes.	In $\frac{1}{2}$ gross Cardboard Boxes	7/	
1d. Packets Crawshaw's Useful Dyes.	Mounted on $\frac{1}{2}$ gross Cards	7/	
The Excelsior Penny Dyes. Mounted on Cards of $\frac{1}{2}$ gross each. These Dyes are good value for the money; suitable for low-class Wholesale Trade, and where Cheap Goods are required. There is no makers Name on the Packets or Cards			5/6
6d. Perfect Black Dye.	In $\frac{1}{2}$ gross Wood Boxes	48/	
3d. Perfect Black Dye.	In $\frac{1}{2}$ gross Wood Boxes	21/	

SUPPLIED BY ALL THE WHOLESALE HOUSES.

E. CRAWSHAW & CO., 80 FANN ST., ALDERSGATE ST., LONDON, E.C.

TO CHEMISTS. NON-POISONOUS — WASHABLE — READY MIXED PAINTS.

ALL SHADES. IN TINS. NO SMELL.

WATER PAINT.—In all the Aesthetic Shades, dries with a beautiful "flatted" surface (without gloss).

OIL PAINT.—In every shade, to dry with a gloss.

ENAMEL PAINT.—In all the New Colours, including Flamingo Red, Electric Green, Japanese Blue, for Basket, Wicker, and Art Furniture; will stand sun, hot water; damp proof; as hard and glossy as porcelain.

FIREPROOF PAINT.—All Colours, ready for use. Washable, Fire-resisting, Innocuous.

FIRE-PROOFING LIQUID.—Transparent or Stained, for Wood Floors, rendering Dresses, Canvas, Boards, &c, Uninflammable.

The above put up in small Tins for **CHEMISTS**, of 1, 2, 3, 4, 7, 14 lbs.; or for Export in $\frac{1}{2}$, $\frac{3}{4}$, and 1 cwt. Iron Kegs and 5-cwt. Casks. These are truly sanitary, non-poisonous, washable, and perfectly harmless Paints. They are most durable, and nearly double the bulk of ordinary pigments, Saving about *one half*. These Paints obtained **SILVER MEDAL** at Inventions Exhibition, 1885.

Manufacturers of Wood Stains, Cup Oil for Carriages, &c., Anti-fouling and Anti-corrosive Paints, Cement for Steam Joints, Liquid Priming for New Walls, &c., &c.

ASPINALL, ASPINALL & CO., Hollydale Works, **LONDON, S.E.**
PECKHAM.

PITCH,

OILS, TALLOW, &c.

J. R. PEACE & CO.,

26 ALEXANDRA BUILDINGS,

Establd.] 41 Ormond Street, Liverpool, [1867.

IMPORTERS OF AND MERCHANTS IN ALL KINDS OF PITCH, OILS, &c.

Hard and Soft Stearine Pitch Hot Neck Grease India Rubber Substitute

Cotton Seed and Patent „ Turpentine & Rosin Roll and Flour Sulphur

Brown, Vegetable & Wood „ Soft Soap, Glue, &c. Tallow, Cylinder Oils,

Stockholm and Archangel „ Brimstone, Ashes, &c. R. D. Petroleum Oils, and

Palm Oil and Rosin „ Elastikon. General Produce.

CORRESPONDENCE SOLICITED.

SAMPLES AND LOWEST PRICES ON APPLICATION.

CRETA PREP.
BOLE, ARMENIA
FERRI, RUBIGO
„ SUB. CARB.
CHARCOAL PRECIP.
PUMICE „
JEWELLERS' ROUGE
&c., &c.

COLOURS

STATON & COOPER,

ESTAB. 1796.] Challinor's Colour Works, City Road, DERBY, [ESTAB. 1796.

WHOLESALE DRUG LEVIGATORS

Manufacturers of Paints, Colours, and Varnishes.

SAMPLES & QUOTATIONS ON APPLICATION.

COLCOTHAR
LAPIS, CALIM.
PLATE POWDER
FULLER'S EARTH
ROTTEN STONE
CROCUS
CORNU CERVI
&c., &c.

PAINTS

Starching made easy and pleasant.

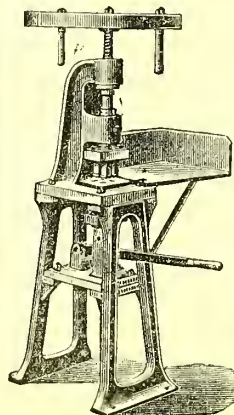
Prevents the iron sticking to the linen.



Suitable for hot or cold water starch.

Sold in 1d., 3d., 6d., and 1s. Packets, and in Large Boxes, for Hotels, Laundries, &c., 5s., 10s., and 20s. each.

Wholesale by Maw & Sons, Evans, Sons & Co., Southall Bros. & Barclay, Wyleys & Co., &c.



HAND & STEAM POWER PRESSES

For making into Blocks, Tablets, or Pellets, Drugs, Blue, Blacklead, and other Powders.

R. M. COLLINGHAM,
ENGINEER,
Green Lane Foundry, Hall.

"Selected"
ESSENCE OF LEMON.
Genuine and of Guaranteed Purity.
This Oil is unsurpassed for aroma and strength.

Sinest
FRUIT ESSENCES.
Prepared from Selected Fruit by Special Process.

Slightly Concentrated
FRUIT ESSENCES
for Flavouring purposes, and Confectionery of every description.

Colourless
VEGETABLE COLOURS
for Confectionery.
Of guaranteed purity and exceptional brilliancy.

AND ALL MATERIALS
REQUIRED BY
Brewers,
Rectifiers,
Cordial Makers,
Wine and Spirit
Merchants,
Mineral Water
Makers, &c. &c.

STEVENSON AND HOWELL.

FELLOWS OF THE CHEMICAL SOCIETY &c &c.

MANUFACTURING CHEMISTS

DISTILLERS AND IMPORTERS OF

**ESSENTIAL OILS
OF GUARANTEED PURITY**

PURE CONCENTRATED

**SOLUBLE
ESSENCES.**

FRUIT-ESSENCES

**PURE COLORINGS
OF EVERY DESCRIPTION**

**ANALYTICAL AND CONSULTING CHEMISTS
TO THE TRADE.**

"Extra Quality"
Soluble Essence of
JAMAICA GINGER.
For Aerated Beverages,
Cordials, Syrups, &c.
This Essence is
unequalled.

FINEST
SOLUBLE ESSENCES
OF EVERY DESCRIPTION,
for the Production of Perfect
Aerated Beverages,
Cordials,
Syrups,
&c.

Soluble,
Brilliant,
Permanent,
Of Guaranteed Purity.
COLOURINGS.
for Brewers, Rectifiers,
Mineral Water
and Cordial
Makers.

American
FOAM SYRUP.
For giving a close Cream,
Head to all Beverages.
One Pound is sufficient
for 150 gallons of
Liquor.

AND ALL MATERIALS
REQUIRED BY
Manufacturing
Confectioners,
Wholesale
Tobacconists,
Perfumers,
Soap Makers,
Biscuit Makers, &c. &c.

**STANDARD WORKS, 95^A, SOUTHWARK ST., LONDON. S.E.
AND 128, HOPE ST., GLASGOW.**

N. G. WILCOCKS, Manufacturer, BATH.

"VICTORY."

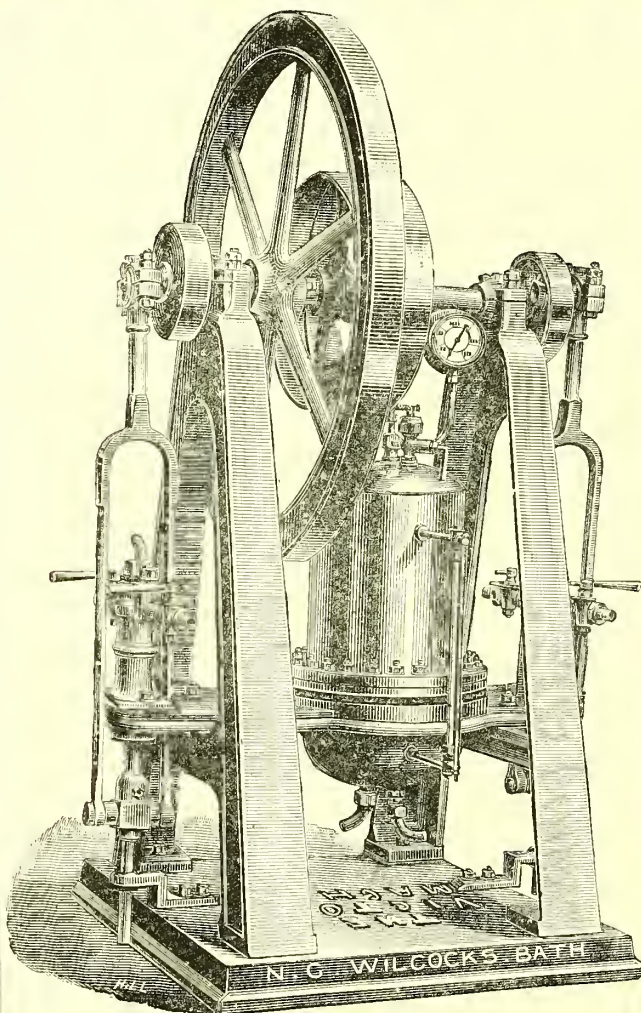
SOUTH STREET,
WISBECH, CAMBS,
Jan. 20, 1885.

DEAR SIR,

I have been working
Machine, and have
found the result very
satisfactory. Please
find cheque enclosed.
You are quite at liberty
to use my letter as a
Testimonial.

Yours truly,

W. DUROSE.



MEMORANDUM.

April 14, 1885.

From J. SLATER,
Chemist, Mineral Water
Manufacturer,
WELLS, SOMERSET.

To Mr. N. G. WILCOCKS,
Bath.

DEAR SIR,

I write just to say
that your man finished
up his work in first-rate
order. Was quick about
it, and finished it all up
in first-rate manner; the
Machine, I like it much.

Yours respectfully,

J. SLATER.

WILCOCKS' "VICTORY" Double Pump Machines, with Steel Shaft and Pulleys, Discs, and Fly Wheel turned up bright. The Pumps and Valve Boxes are of best Gun Metal; the Plungers are on our well-known double-cup leather principle (if expressly ordered, we fit Ram Plungers to work through a ring or collar of cupped leather, and the price is the same). The automatic Blow Back Valve, supplied with each Machine, can be set to work at any required pressure by the bottler. The Cylinder is of hammered Copper, thickly tinned inside with best obtainable English tin. The Gas and Water Cocks have Index Plates with raised lettering. The massive Cast Iron Frame is carefully painted, picked out, and varnished, and well finished; and each Machine is tested by actual work before being sent off. This Machine produces a highly-charged gaseous water, free from metallic contamination and foreign impurities; and amongst numerous Testimonials the above two are a sample.

2 $\frac{1}{2}$ -in. Pumps, 9-gal. Cylinder, as above; }
approximate weight, 14 cwt. } **£35.**

BATH CITY BRASS FOUNDRIES & IRON WORKS, BACK STREET, BATH.

N. G. WILCOCKS, Aerated Water Engineer, BATH.*We hold an immense number of Testimonials, which we shall be pleased to show to Customers.***TESTIMONIALS.**

MINERAL WATER WORKS,
CAPTAIN CAREY'S LANE,
BRISTOL, *October 8, 1885.*

DEAR SIR,—I have much pleasure in giving you a testimonial. All the purchases I have made from you have given satisfaction, and I have been a customer of yours for very many years. The Bath manufactory you fitted up to my order in the spring of the year is perfectly fitted up. I am very pleased with the way you have carried out the work. Your make Double Pumps, Oak Generators, and Copper Gasometers, supplied for my Bristol manufactory to my order some time since, are working all right still.

Yours truly,
To Mr. N. G. WILCOCKS, Bath. THOMAS BROOKE.

A. C. HATTATT & CO., Mineral Water Makers,
JOHN STREET, KINGSLAND,
SOUTHAMPTON,
December 7, 1885.

DEAR SIR,—We have much pleasure in testifying to the general excellence of the various machinery you have at different times supplied us with during the last fifteen years. The Horizontal Steam Engine, Double Pumps, &c., have worked, and are still working, exceedingly well.

Very truly yours,
To Mr. N. G. WILCOCKS, A. C. HATTATT & CO.
Soda Water Engineer,
Bath, Somerset.

MEMORANDUM.

From GARDNER & BRANCH,
Crown Brewery and
Mineral Water Works,
ST. MARY STREET, GLOUCESTER. To Mr. N. G. WILCOCKS,
Back Street,
BATH.

DEAR SIR,—The Soda Water Machine we recently purchased continues to give perfect satisfaction. I worked your make Machinery upwards of ten years ago. I speak after having had upwards of twenty years' experience in the Mineral Water Trade. Truly yours,

E. C. AWTY,
*Manager of the Mineral Water Department
for Messrs. Gardner & Branch.*

AERATED WATER MANUFACTORY,
MARCH, CAMBS,
December 18, 1885.

DEAR SIR,—You remember I had of you last spring a complete new turn-out of machinery, beginning with a Vertical Boiler, Horizontal Steam Engine, one of your large double "Victory" 2½-inch Pumps (with your improved vertical cylinder, doing away with the abominable cog wheels and fan mixers), and finishing with your gigantic Gas Work, with the improved arrangement for returning surplus gas of cylinder into gasholder. I am now very pleased to state that all these, with the Jacketed Steam Pan, have given great satisfaction, turning out splendid drinks in a most economical manner.

I fancy the fan mixers will soon be a thing of the past.

Yours truly,
To Mr. N. G. WILCOCKS, JAMES GREEN,
Engineer, Bath. March, Cambs.

MEMORANDUM.

From W. M. RICHARDSON, To Mr. N. G. WILCOCKS,
Provision Merchant and Engineer,
Manufacturer of Aerated Waters, BATH, SOMERSET.
32 CHURCH LANE, HULL. *August 22, 1885.*

DEAR SIR,—The Soda Water Machine I bought from you three months ago has given me great satisfaction. I have not a fault to find. Please send me a Corking Rack.

TESTIMONIALS.**MEMORANDUM.**

From M. MILLARD, To Mr. WILCOCKS,
Mineral Water Manufacturer, Engineer, BATH.
TROWBRIDGE, WILTS. *Dec. 15, 1885.*

DEAR SIR,—The Oak Generator you supplied me with has given every satisfaction.

I remain, yours faithfully,
M. MILLARD.

MINERAL WATER WORKS,
PONTYPRIDD, GLAMORGANSHIRE,
To Mr. N. G. WILCOCKS, Bath. *March 21, 1885.*

DEAR SIR,—With pleasure I send you a testimonial. The Machines you supplied me with some time ago are doing excellent work, and are giving every satisfaction. I shall certainly order from you whenever I require anything again.

Yours truly,
JOHN BANFIELD.

UPTON VALLEY AERATED WATER WORKS
(Established 25 years),
TORQUAY, *December 14, 1885.*

FREDK. W. DAY.
MEMORANDUM.
To Mr. N. G. WILCOCKS, Bath.

The large Soda Water Machine I purchased from you last continues to give the highest satisfaction. I should advise every mineral water maker, in purchasing machinery, to consult you, whose years of experience must prove a great help to them. Wishing you the continued success you have so long enjoyed,

I am, dear Sir,
Yours respectfully,
FREDK. W. DAY.

From J. RUDDERHAM, To Mr. WILCOCKS,
Mineral Water Manufacturer, BATH.
WISBEACH. *October 1885.*

DEAR SIR,—The "Matchless" Tube Filling Machine I bought of you works to my entire satisfaction.

Yours respectfully,
JOHN RUDDERHAM.

MINERAL WATER MANUFACTORY,
GOODHEAD STREET, NOTTINGHAM,
September 14, 1885.

SIR,—Some time ago we purchased of you a complete plant—Steam Engine and Boiler, and Soda Water Machine, Bottling Apparatus, &c. The goods we are able to produce with it are of the highest class, and we must say the Machinery is very satisfactory; it is simple and economical in working, and we believe is one of the best Machines in the market, and one that is hard to beat.

Yours respectfully,
THRAVES, WILLIAMS & SHARPE.
To Mr. N. G. WILCOCKS, Engineer, Bath.

MEMORANDUM.

From G. PHILLIPS, To Mr. N. G. WILCOCKS,
Mineral Water Manufacturer, Engineer, BATH.
NEW ROAD, CHATHAM. *Dec. 19, 1885.*

DEAR SIR,—According to promise, I beg to state that I am exceedingly well satisfied with the large Double Pump, "Victory"; also the whole of the plant you supplied. Shall be pleased to show it at work to anyone about purchasing a Machine, &c., from you.

I remain, dear Sir, yours truly,
GEO. PHILLIPS.

GUÉRET FRÈRES,

Mechanical Engineers, privileged in France and Abroad,
72, BOULEVARD DE LA GARE, PARIS.

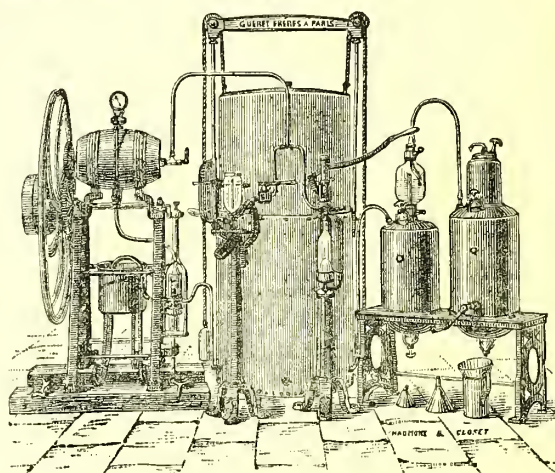
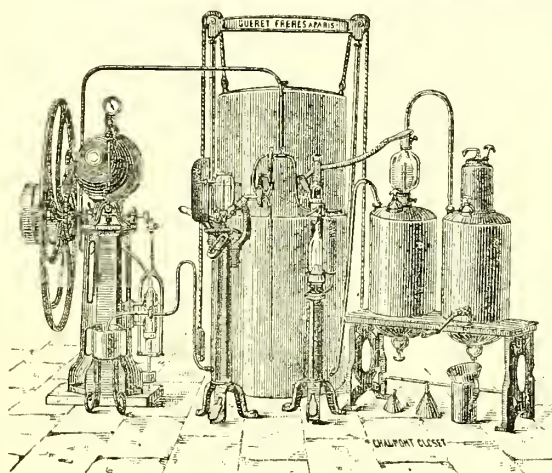
GOLD MEDAL, AMSTERDAM, 1883.

PLANT & SYPHONS FOR THE MANUFACTURE OF AÉRATED BEVERAGES,

WITH ALL THE LATEST IMPROVEMENTS.

COMPLETE CONTINUOUS APPARATUS, SPHERICAL OR PEAR-SHAPED.

The Saturator is of brass, guaranteed free from every defect in construction and perfect in action, tested at high pressure, combining economy with the greatest sanitary security, and enjoying an unrivalled reputation.



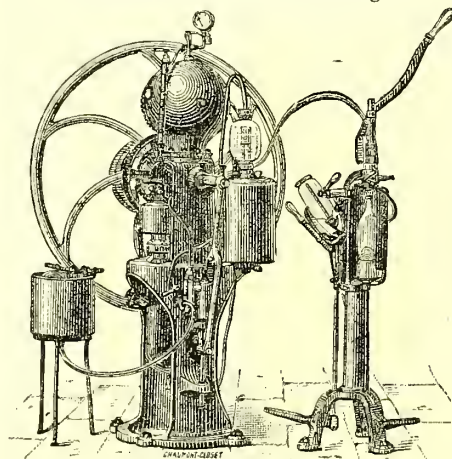
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With small levers, fittings of metal of highest quality, and best glass.



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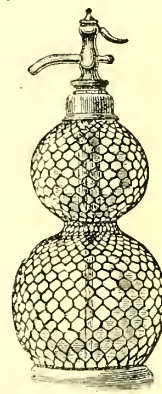
For the automatic generation of carbonic acid gas, the only practical system applicable to the manufacture of Aërated Beverages.



GAZOSELTZ

For the instantaneous production of Aërated Beverages at table.

Any one can use them.



FULL PARTICULARS AND GENERAL CATALOGUE SENT ON APPLICATION.

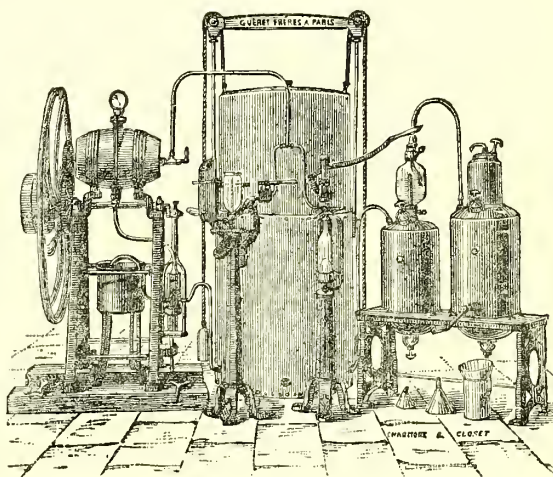
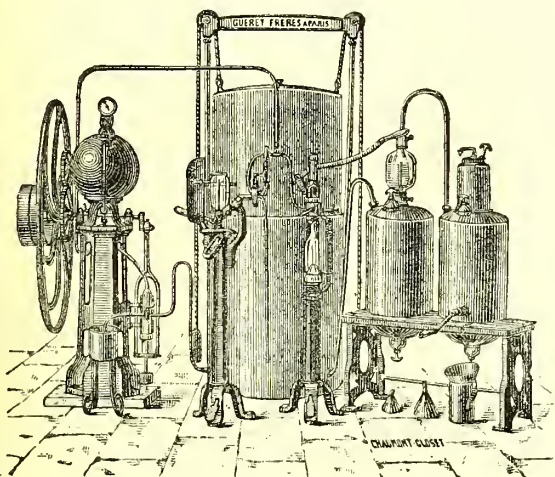
GUERET FRÈRES,

Constructores mecánicos, privilegiados en Francia y en el extranjero,
72 BOULEVARD DE LA GARE, PARIS.

MEDALLA DE ORO, AMSTERDAM, 1883.

APARATOS Y SIFONES PARA LA FABRICACION DE BEBIDAS GASEOSAS, DOTADOS DE LOS ÚLTIMOS PERFECCIONAMIENTOS.

APARATOS CONTÍNUOS completos, de forma esférica ó de bota. El saturador es de bronce, y se garantiza libre de todo defecto en su construccion, y de un funcionamiento perfecto, probado á alta presion, reuniendo todas las condiciones de la higiene y de la economia y gozando de una reputacion incontestable.



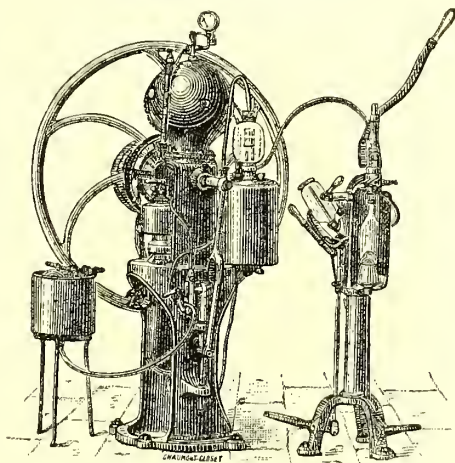
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á palanca pequeña, con ajustes de laton de 1^{ra} calidad y del mejor cristal, forrados de mimbre.



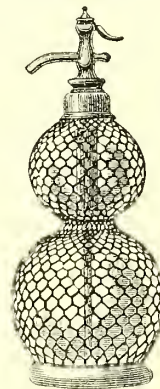
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de produccion automática del gaz acido-carbónico, los únicos absolutamente practicables para la fabricacion de bebidas gaseosas.



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para producir bebidas gaseosas instantáneamente. Cualquiera puede usarlo.



SE ENVIARÁN PORMENORES Y CATÁLOGO GENERAL AL QUE LOS SOLICITE.

WILLIAM MEADOWCROFT

MANUFACTURING CHEMIST,

MANUFACTURER OF

CONCENTRATED SOLUBLE
ESSENCE OF **LEMON,**

GINGER, ORANGE, GINGER ALE,

And all other Essences, Acids, Colouring, &c., used in the Mineral Water Trade.

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CONCENTRATED

SOLUBLE ESSENCE OF LEMON,

MADE BY A SPECIAL PROCESS,

AND

MORE THAN DOUBLE STRENGTH OF ANY OTHER LEMON.

Price 7s. per lb.; 10 lbs., 6s. 9d. per lb.

One oz. is quite sufficient for 13 doz. small bottles of the most delicious Lemonade.

AGENT FOR

GALLOWAY'S SODA WATER MACHINERY,

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BRATBY & HINCHLIFFE have pleasure in introducing to the TRADE their

NEW "CHEMISTS'" SODA-WATER PLANT.

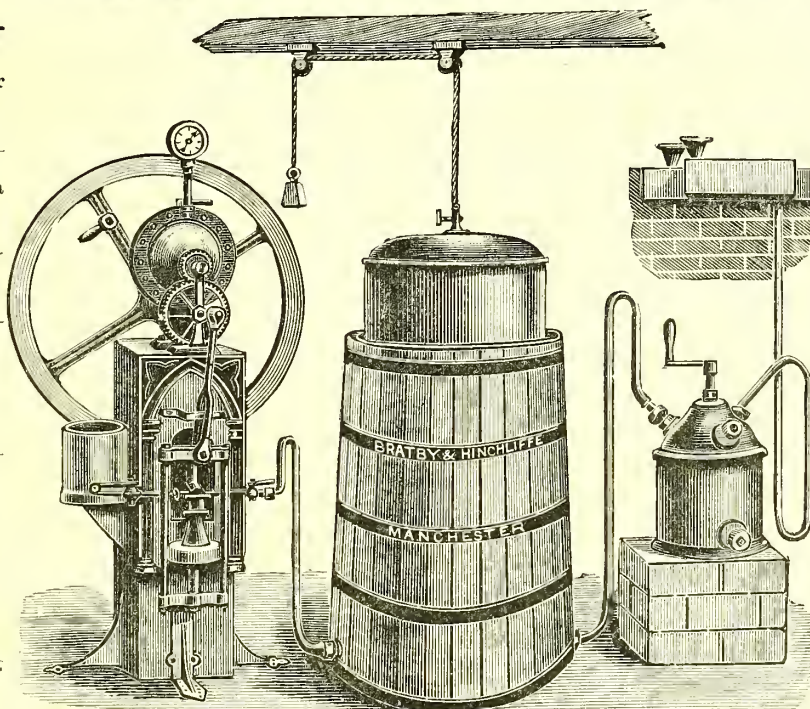
Makes all the popular
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Can be started at a
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Suitable for Export.

Cheapest and Best
Soda-water Plant
in the Market

Specially made for
"Chemists,"
Hotel Keepers,
and
Regimental Messes.



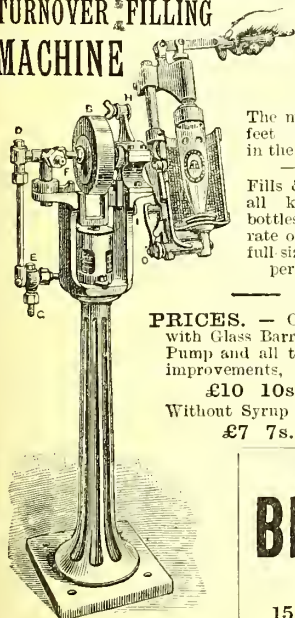
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complete,
£28 0s. 0d.

Guaranteed to pro-
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Manufacture all kinds
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Capable of manufac-
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The most per-
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in the market.

Fills & syrups
all kinds of
bottles at the
rate of 60 doz.
full-size bottles
per hour.

PRICES. — Complete,
with Glass Barrel Syrup
Pump and all the latest
improvements,

£10 10s.;

Without Syrup Pump,
£7 7s.

EVERY REQUISITE FOR THE TRADE
ALWAYS IN STOCK.

BOTTLES. BOXES.

Essences,
Fruit Syrups, &c.

CITROCHLORIC ACID,

A Substitute for Citric and Tartaric Acid, at one-
half the cost. Write for medical opinion
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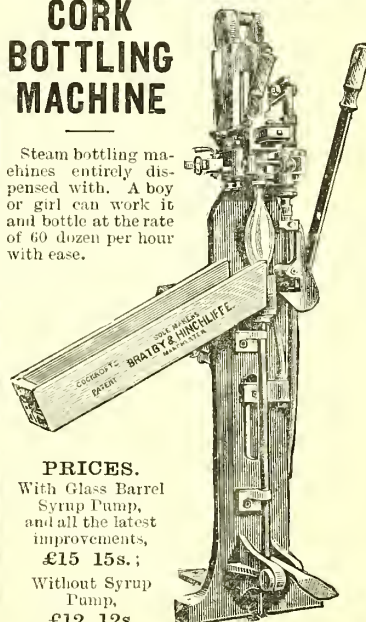
BRATBY & HINCHLIFFE,

146 Minories, London, E.C.;

158 SOUTH FIFTH AVENUE, NEW YORK;
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THE "RAPID" CORK BOTTLING MACHINE

Steam bottling ma-
chines entirely dis-
pensing with. A boy
or girl can work it
and bottle at the rate
of 60 dozen per hour
with ease.



PRICES.

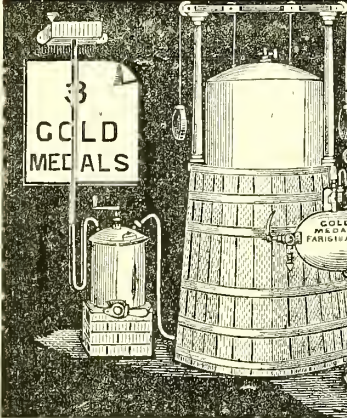
With Glass Barrel
Syrup Pump,
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£15 15s.;

Without Syrup
Pump,
£12 12s.

Head Office: SANDFORD STREET, ANCOATS, MANCHESTER.

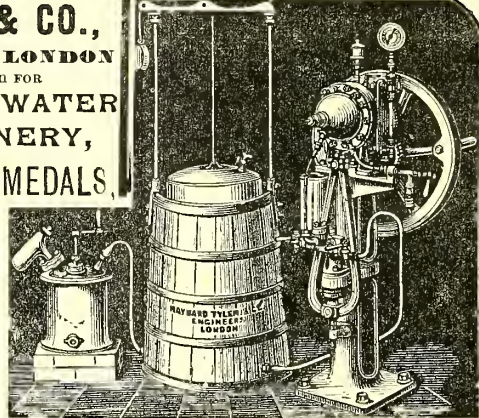
Hunyadi János

CAUTION.—Circumstances which have come to the knowledge of Andreas Saxlehner, Buda Pest, Sole Proprietor of the Hunyadi János Spring, compel him to WARN the British Public against SPURIOUS IMITATIONS. To secure genuineness, purchasers should see that every bottle has on the LABEL the name of "THE APOLLINARIS COMPANY (LIMITED), London."



3 GOLD MEDALS

HAYWARD TYLER & CO.,
WHITECROSS STREET, LONDON
WERE AWARDED FOR
AERATED WATER MACHINERY,
3 GOLD MEDALS,
PARIS, 1878.
LONDON 1884.
CALCUTTA, 1884.



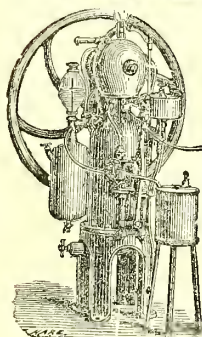
H. FAVARGER.

GOLD MEDAL]

MONDOLLOT'S PATENT

[PARIS, 1878.]

SODA WATER MACHINERY.



The "MEDIUM"
 The "MEDIUM"
 The "MEDIUM"
 The "MEDIUM"
 The "MEDIUM"
 The "MEDIUM"
 The "MEDIUM"

is guaranteed to make extra sharp Soda Water, and the finest Lemonade, Ginger Beer, Ginger Ale, &c.

requires no skilled labour, and can be worked by hand or steam power.

saves 50 per cent. of materials over any other hand machine, and requires less power.

will last for years without repairs beyond the renewal of washers.

requires no gasometer, and occupies but a quarter of the room of an ordinary machine.

is automatic in all its work, and merely requires the wheel to be turned.

is of the finest workmanship, and is in use all over the world.

Apply for illustrated Catalogue to

H. FAVARGER, 75^C TURNMILL STREET, LONDON

VALLET'S PATENT IMPROVED STOPPERED BOTTLES,

For Mineral Waters and Gaseous Liquids,

Are now used by upwards of 1,000 Soda Water Manufacturers in the United Kingdom.

SAMPLES AND PRICES OF BOTTLES AND STOPPERS ON APPLICATION.

Fig. 9. Boxwood Bottle Openers, polished 8/6 per gross
 " Ditto, fitted with indiarubber inside 10/6 "
 Fig. 10. New Bottle Opener, fitted with rubber 6/ "

ROYALTY FREE.

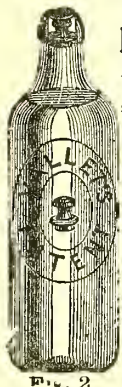


Fig. 2

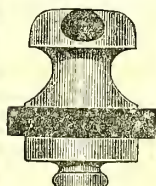


Fig. 6.

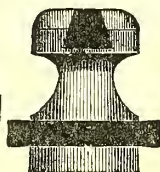


Fig. 1.

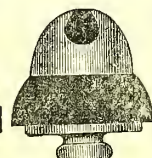


Fig. 7.

It will be seen by reference to figs. 6 and 7 that I now form a button or nut under the base of my Stopper for the purpose of easily extracting same from the Bottle without spoiling or removing the indiarubber from the body of the Stopper. This is readily accomplished by the use of a suitable tool made to fit on the nut; the Stopper being grasped and withdrawn from the bottle in a second, without injury to the Stopper.

Therefore, it will be a great saving to Mineral Water Manufacturers, as by the old way of extracting the Stoppers from the Bottle when necessary, very often the indiarubber is spoiled, and the time it takes by this slow process is worth more than the Bottle itself; so that in many instances Bottles with spoiled or dirty Stoppers are put aside as worthless stock.

Figs. 1 and 6 Stoppers, when invoiced without Bottles, are ready fitted with the rubber washer on, and are easily inserted into the Bottle by the simple pressure of the thumb, the washer at the same time folding in the hollow part of the stem, when passing into the Bottle. They are the only Stoppers which require no tool to fit into the Bottle; and when a Bottle breaks, which seldom occurs, the Stoppers are always fitted with washer and ready to be inserted in a new Bottle. Therefore they are the most durable and inexpensive Stoppers in the Trade.

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MINERAL WATER SPECIALITIES.

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RYLANDS' "Reliance" Globe Stoppered Bottles.

Superior to Codd's. Can be inclined two ways in pouring out.

RYLANDS' Crystal Valve Self-Opener Bottles,

The best bottles in the world. *Requires no Opener.* Simple, safe, and clean. (See Engraving.)

RYLANDS' New Bulb Globe Stoppered Bottles.

The Cheapest Bottle in the Market.

CODD'S Globe Stoppered Soda-Water Bottle, at reduced prices.

MANUFACTURED BY

DAN RYLANDS (Late CODD & RYLANDS),

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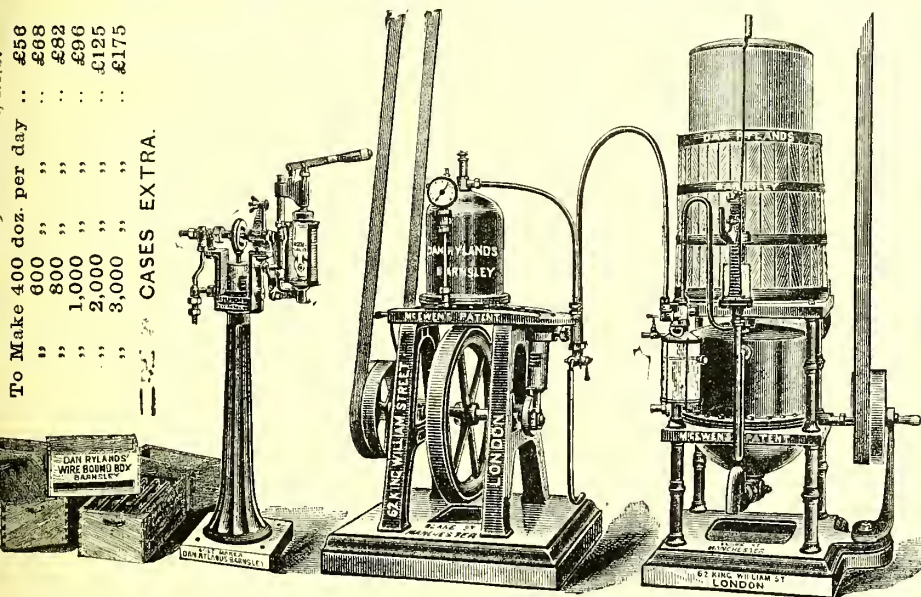
Proprietor of the Patent Rights of Codd's Patent Bottle Company, London District, and **SOLE MAKER FOR EXPORT of CODD'S PATENT BOTTLES.**

Proprietor of the Patent Rights and Sole Maker of McEWEN'S PATENT

GOLD MEDAL ECONOMICAL SODA-WATER MACHINERY

Which saves 30 PER CENT. in Materials, and 50 PER CENT. in Driving Power.

To Make 400 doz. per day .. £56
 " " " " " £68
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 CASES EXTRA.



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RAPID PARAGON" TURNOVER FILLING MACHINE.

1,800 already Sold. Price, with Syrup Pump. £9 9s., f.o.b. Cases extra.

SOLE MAKER of **RYLANDS' PATENT WIRE-BOUND BOXES**, the lightest and most serviceable in the Trade. Specially suitable for Hot Climates.

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SPECIALITY.—Patent Chemist's Hand-power Plant, guaranteed to be worked easily by a strong lad, and capable of turning out from 100 to 150 dozen superior Aerated Waters daily. Price £35. sent fitted up ready for use.

HONOURABLE MENTION:
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GOLD MEDAL, SOCIETY OF ARTS, PARIS, 1884.

TO AERATED WATER MANUFACTURERS.

Ginger Ale, Ginger Beer, and Lemonade, made from the following Essences, are unrivalled for their exquisitely fine flavour, and richness of aroma.

HAY'S SOLUBLE + ESSENCES.

ARE GUARANTEED TO BE THE FINEST IN THE MARKET.

HAY'S SOLUBLE ESSENCE OF JAMAICA GINGER.

A Pure Essence of the Finest Ginger, perfectly free from Capsicum. Highly adapted for the manufacture of Transparent Aerated Waters, and for all Dietetic, Medicinal, and Pharmaceutical purposes. Trade Price, **5s.** per lb.; 12 lbs. and upwards, **4s. 6d.** per lb. Extra Fine and Strong, **5s. 6d.** per lb.; 12 lbs. and upwards, **5s.**

HAY'S COMPOUND FORTIFIED ESSENCE OF JAMAICA GINGER. FOR FIRST QUALITY GINGER ALE.

Specially prepared for the manufacture of the very Finest Ginger Ale made, is an addition of Vanilla, Lemon, and other flavours to the above. It imparts, with the exquisite Ginger Aroma of the above-mentioned Essence, a peculiarly fine fruity flavour, combined with the fullest amount of fragrance and pungency. Trade Price, **5s. 6d.** per lb.; 12 lbs. and upwards, **5s.** Extra Fine and Strong, **6s.** per lb.; 12 lbs. and upwards, **5s. 6d.** Quantity required, five fluid ozs. to each gallon of Syrup, making 106 10-oz. Bottles.

HAY'S GINGER ALE EXTRACT. FOR SECOND QUALITY GINGER ALE.

This Extract is strongly recommended for the manufacture of Ginger Ale, to which it imparts Pungency, Colouring, great Brilliancy, and an unusually Fine Ginger Flavour and Aroma, and makes a thoroughly good article. Trade Price, **4s. 6d.** per lb.; 12 lbs. and upwards, **4s.** Quantity required, three fluid ozs. to each gallon of Syrup, making 106 10-oz. Bottles.

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This Essence, which is a complete Bouquet of Flavours in a highly concentrated state, makes a Ginger Ale possessing an amount of aroma, flavour and quality that will be sure to command a large sale, and that is unsurpassed by the so-called finest Belfast Ginger Ale. Trade Price, **9s.** per lb.; 12 lbs. and upwards, **8s. 6d.** Quantity required, half a fluid oz. to each gallon of Syrup, making 106 10-oz. Bottles. This Essence will be found most valuable to the general trade.

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A magnificent Preparation, perfectly soluble, and makes the finest Lemonade obtainable. Trade Price, **8s. 6d.** per lb.; 12 lbs. and upwards, **8s.** "Added in the proportion of one fluid oz. to each gallon of Syrup, the Soluble Essence imparts the most delicious flavour of the Lemon."—*The Chemists' Journal*.

HAY'S GINGER CHAMPAGNE ESSENCE.

For the manufacture of Ginger Champagne. This Essence is a combination of the finest flavours, and imparts with the Ginger a most exquisite aroma, making a most delicious and refreshing approximation to Champagne. Trade Price, **8s.** per lb.; 12 lbs. and upwards, **7s. 6d.** per lb. Quantity required, ten fluid ozs. to each gallon of Syrup, making 106 10-oz. Bottles.

NOTE.—The above are specially recommended to Clubs, Hotels, Messes, and Stores requiring the very finest Essences obtainable. There is nothing in the Market to equal them.

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Specially prepared as a "pick-me-up" for hot climates. Price, **6s. 6d.** per lb.; 12 lbs. and upwards, **6s.** Quantity required, 5 fluid ozs. to each gallon of Syrup, making 106 10-oz. Bottles.

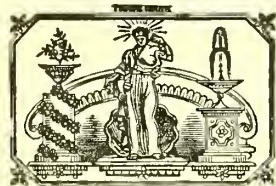
A FEW OF THE MANY REPORTS OF THE LEADING HIGHEST MEDICAL AND OTHER JOURNALS ON MY PREPARATIONS ARE HERE QUOTED:—

SOLUBLE ESSENCE OF GINGER.—"It should entirely supersede the official preparation of the British Pharmacopoeia."—*Medical Press*. "This Essence is of a very delicate and beautiful appearance, the aroma is fine and powerful, and its strength is very great indeed. The flavour is really exquisite, and it concentrates in quite an extraordinary degree the very best aromatic qualities of ginger."—*Drinks*, London, Sept. 1, 1884.

GINGER CHAMPAGNE MADE FROM HAY'S ESSENCE.—"An excellent and most agreeable beverage."—*The Lancet*. "One of the most delicate and wholesome drinks in the market."—*Medical Press*. "The fine Aroma of Ginger which Mr. Hay has caught with remarkable success is an excellent substitute for Alcohol, as it gives what old port wine drinkers used to call 'body,' and to many people besides professed teetotallers, an occasional change at least from the Royal French Beverage to its less costly, but equally sparkling and more refreshing, English rival is a welcome treat."—*The Chemist and Druggist*.

GINGER ALE MADE FROM HAY'S FORTIFIED ESSENCE.—"It pours out with as fine a 'head' as any glass of ale, and possesses all the fine aromatic flavour of the pure ginger. It is a beverage which is sure to win favour wherever introduced."—*The Chemist and Druggist*.

The difference between preparations made from the above Essences and those made from the numerous spurious imitations of the above, bearing the name of Soluble Essences, is most marked, and no manufacturer using the latter can compete with one using Hay's Preparations, as is universally known. *The greatest care is used in packing for Export.*



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BEVERLEY ROAD,

Indentors, to prevent disappointment, should specify that the goods are to be of Hay's Manufacture.

W. HAY CAUTIONS THE TRADE against the use of those spurious so-called SOLUBLE ESSENCES which, besides having NO GINGER AROMA, are FLAVOURLESS, RANK, and DISAGREEABLE, and are little more than TINCTURES OF CAPSICUM.

IDRIS & COMPANY,

MANUFACTURING CHEMISTS,

Pure Mineral Water Manufacturers,

SYPHON AND SELTZOGENE MAKERS.

BEST GOODS. BEST PRICES.

Lime Juice Cordial	7/6	per dozen.	} Reputed Quarts.
Limetta Cordial	7/6	„	
Palatable Lime Juice	9/	„	
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(ABOUT THIRTY VARIETIES. LIST FREE.)

PURE LIME JUICE.

PURE LEMON JUICE.

NATURAL FRUIT ESSENCES.

SOLUBLE ESSENCE OF LEMON.

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(THE BEST ARTICLE EVER OFFERED.)

Sparkling Phosphate

The original preparation containing Hypophosphites as certified by Professor Attfield.

THE MOST AGREEABLE OF ALL THE PHOSPHATIC DRINKS AND THE BEST SELLING ARTICLE.

PATRONISED BY THE PRINCE OF WALES.

IMPROVED SELTZOGENES.

20 per cent. off usual list prices.

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ASCHAM STREET, KENTISH TOWN, LONDON, N.W.

JEWSBURY & BROWN'S MANCHESTER MINERAL WATERS,

**PURE SODA, SELTZER, POTASH, LITHIA, &c.,
LEMONADE,
GINGER ALE, AND QUININE TONIC.**

Prepared and Bottled specially for Export, and warranted to keep well.

Manufactured with the utmost care and by improved machinery, these productions are recommended for **purity and excellence of quality** by many leading members of the Medical Profession, and have for many years had a preference by the public; the flavour of the **Lemonade and Ginger Ale** being procured from the **fresh Fruit and Finest Jamaica Ginger**, they may be relied upon as furnishing delicious and satisfactory beverages, either for general use or specially for invalids.

The **Soda Water** is absolutely free from any metallic impregnation, and being by improved machinery highly charged with Carbonic Acid Gas, and each bottle containing a definite and unvarying proportion of **Pure Carbonate of Soda**, J. & B. have every confidence in inviting a trial from those who have not already patronised them.

The **Seltzer, Potash, and Lithia Waters** are prepared with the utmost exactitude and the purest ingredients.

The **New Quinine Tonic** furnishes a pleasant form for the administration of a most valuable restorative, and is refreshing and agreeable.

Ginger Ale (Aromatic) of superior quality, and strongly recommended as a Non-Alcoholic and warm stimulant beverage.

N.B.—Every Bottle is protected by a distinctive Label, with Name and Trade Mark, and each Cork is branded.

Counter Bills and Analytical Reports, with Agents' Names and Addresses, supplied when requested.

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IN THE MARKET.

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"The National Table Waters."

"ABSOLUTELY PURE."



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Soda, Potass, Seltzer, Lemonade, Aromatic Ginger Ale.
For Gout: Lithia Water, and Lithia and Potass Water.

ASK FOR ELLIS'S.

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NEW AND IMPORTANT DISCOVERY.

GINGER ALE

FROM PURE JAMAICA GINGER.

THE ROYAL YORK-
SHIRE GINGER ALE,
from Pure Jamaica Ginger, is Non-
intoxicating.



The difficulty of using Ginger in the Manufacture of "Ginger Ale," and at the same time having a CLEAR and SPARKLING DRINK, has, after much labour and expense, been thoroughly overcome by

MESSRS. HARSTON & CO., OF LEEDS.

"ABSOLUTELY PURE."
See Analysis by Drs. J. H. HASSALL,
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THE CHEMISTS' SIXPENNY TELEGRAM CODE



FOR LONDON, BRISTOL, AND HARROGATE.

IN SYPHONS.

	Soda	Soda BP	Lemon	Pot	Pot BP	Seltzer	Lithia	G Ale	Carb	Lime Juice
2 doz. ..	Salins	Salisbury	Ludlow	Parsonston	Ratford	Birr	Cambridge	Dublin	Haggerston	Maldstone
9 " ..	Sandown	Setton	Lyva	Perth	Ratons	Bradford	Cardiff	Dundee	Hampstead	Manchester
6 " ..	Saxby	Scotby	Lucan	Parkend	Reading	Birmingham	Chelmsford	Derry	Highbury	Malvern
4 " ..	Shaw	Selling	Longport	Paditiam	Roydon	Brug	Clare	Dover	Highgate	Melton
3 " ..	Severa	Sbadwell	Launcester	Penzance	Rugby	Boston	Clonmell	Durham	Holloway	Milford
2 " ..	Seraton	Shanklin	Litchfield	Pinner	Ruthin	Balmoral	Coventry	Danbar	Harpenden	Mold
1 " ..	Slough	Shapwick	Lincoln	Plymouth	Ramsgate	Bury	Crewe	Doncaster	Hanwell	Monce

IN CORKED BOTTLES.

	Soda	Soda BP	Lemon	Pot	Pot BP	Seltzer	Carb	Lime Juice	G Ale	G Beer	Lithia
12 doz. ..	Twyford	Tavistock	Temple	Ulster	Upton	Vauxhall	Arundel	Aberdeen	Ayr	Athlone	Enfield
6 " ..	Tunbridge	Tring	Thame	Uxbridge	Udny	Verney	Alcester	Abingdon	Avon	Athy	Ealing
3 " ..	Treyor	Twedd	Truro	Usk	Uddington	Virginia	Avon	Ardmore	A-bby	Autrim	Epping
Sparkling Rubine.											Zoedone.
30 doz. ..	..	..	..	..	America	..	..	..	..	..	..
12 " ..	..	..	..	..	France	12 doz. ..	..	..	..	Melbourne	..
6 " ..	..	..	..	..	Spain	6 " ..	..	..	..	Sydney	..
3 " ..	..	..	..	..	Germany	3 " ..	..	..	..	Adelaide	..

EXAMPLE.

Please send immediately—

- 12 doz. Soda, B.P., Syphons
6 " Lemonade
12 " Soda, B.P., Cork
6 " Soda, Cork
3 " G. Ale, Cork

Salisbury—Lucan—Tavistock—
Tunbridge—Ashby.

THE CHEMISTS'

Aerated & Mineral Waters Association,
LIMITED.After this date a series of Chemists' Opinions
of the Waters Manufactured by this Association
will be published Monthly.

Telegraphic Addresses—

Rubine, London.
Chemists, Starbeck, Harrogate.
Chemists, Sun Factory, Bristol.

Telephone No. 7547.

PURVEYORS BY SPECIAL APPOINTMENT
TO HER MAJESTY THE QUEEN.MUMBY'S
MINERAL WATERS

Are Perfectly Pure and of First-class Quality.

SODA WATER, POTASS WATER,
SELTZER WATER, TONIC WATER,
GINGER ALE, LEMONADE, &c.

IMPORTANT TESTIMONIAL.

H.M.S. "SERAPIS," Portsmouth, 25th May, 1876.

Messrs. C. MUMBY & Co.,

Gentlemen,—The Soda Water supplied by you for the use of H.R.H.
The PRINCE OF WALES on board H.M.S. "Serapis" was of excellent
quality, kept in good condition, and gave great satisfaction to His Royal
Highness, his suite, and the officers of the ship.

(Signed)

THOMAS BRADBRIDGE, Paymaster.
T. W. SCADDAN, Chief Steward.These Celebrated Waters can be supplied in
Syphons with Silver-plated Tops.

GOODS CARRIAGE PAID. PRICES ON APPLICATION.

34 THE HARD, PORTSMOUTH.

TALBOT & CO.'S
HIGH-CLASS
MINERAL WATERS

OBTAINED THE



HIGHEST
AWARDS
GREAT
INTERNATIONAL
HEALTH
EXHIBITION
LONDON
1884

LONDON AGENTS—

MESSRS. HOGGEN & CO.,
36 GRACECHURCH ST.

GINGER ALE

Unrivalled for fine Aromatic Flavour.

Write for Samples for comparison, which is the most satisfactory way of testing.
GOODS SPECIALLY PREPARED FOR EXPORT, AND GUARANTEED
TO KEEP IN ANY CLIMATE IF PRESERVED FROM FROST.

Manufactory: GLOUCESTER.

W. J. BUSH & CO.,

MANUFACTURING CHEMISTS,

DISTILLERS AND IMPORTERS OF

ESSENTIAL OILS AND FRUIT ESSENCES

INVENTORS OF

**SOLUBLE ESSENCES FOR AËRATED WATER
AND CORDIAL MANUFACTURERS.****FRENCH CREAM GUM EXTRACT**

PROTECTED BY ROYAL LETTERS PATENT,

For producing a head of Creamy Richness upon all kinds of Syrups, Aerate Waters, Beers, Ales, Cider, Champagne, &c., 2s. 6d. per pound.

W. J. BUSH & CO. regret having to Caution the Trade against spurious imitations of this article most of which are mere rubbish.

**W. J. BUSH & CO.'S
ENGLISH DRAWN ESSENTIAL OILS**

OL. AMYGD. ESSENT. ANG.
 OL. AMYGD. ESSENT. ANG.
 Sine Acid. Prussic.
 OL. ANETHI ANG.
 OL. CARUI ANG.
 OL. CARYOPH. ANG.
 OL. CUBEBAE ANG.
 OL. COPAIBAE ANG.
 OL. CINNAM. VER. ANG.

OL. MYRISTICÆ ANG.
 OL. MENTH. PIP. MITCH.
 OL. MENTH. PIP. MITCH
 RECT.
 OL. PIMENTÆ ANG.
 OL. PATCHOULI ANG.
 OL. SASSAFRAS ANG.
 OL. CORIANDRI ANG.

OL. SANTAL. FLAV. ANG.

OL. LIMONIS
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ARTILLERY LANE, BISHOPSGATE, LONDON.

W. J. BUSH & CO.,

DROGUISTAS AL POR MAYOR.

QUÍMICOS MANUFACTUREROS,

DESTILADORES É IMPORTADORES DE

**Aceites esenciales y esencias
de frutas,**

INVENTORES DE LAS

Essencias solubles para aguas gaseosas,
Y MANUFACTUREROS DE CORDIALES.

Crema francesa, extracto de goma

PROTEGIDA POR CÉDULAS DE PATENTE

*Para producir una rica espuma con todos los jarabes,
aguas gaseosas, cervezas, sidras, champana, etc.,
12 rs. la liba.*

W. J. BUSH & CO. sienten tener que advertir
el comercio contra las imitaciones espúreas de
este artículo, la mayor parte de las cuales
son absolutamente viles.

**Aceites esenciales de
extraccion inglesa.**

OL. AMYGD. ESSENT. ANG.	OL. CINNAM. VER. ANG.
OL. AMYGD. ESSENT. ANG. Sine Acid. Prussic.	OL. MYRISTICÆ ANG. OL. MENTH. PIP. MITCH.
OL. ANETHI ANG.	OL. MENTH. PIP. MITCH. RECT.
OL. CARUI ANG.	OL. PIMENTÆ ANG.
OL. CARYOPH. ANG.	OL. PATCHOULI ANG.
OL. CUBEBA ANG.	OL. SASSAFRAS ANG.
OL. COPAIBA ANG.	OL. CORIANDRI ANG.

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CHEMISKE FABRIKANTER,

DISTILLATEURER OG IMPORTEURER AF

**Essents-Olie og Frugt
Essentser,**

OFFINDERE AF

Opløselige Essentser for Aerated Vand,
OG CORDIAL-FABRIKANTER.

Fransk Fløde-Gummi-Extract

BESKYTTET VED KONGELIGT PATENT.

*Por at producere rigt Skum paa alle Slags Sirup, Aerated
Vand, Ol, Most, Champagne etc. pr lb. Kr. 2.25.*

W. J. BUSH & CO. beklage at De ere tvungne
til at gjøre Handlende opmærksom paa de
mange uægte Efterlignelser af hvilke de fleste
ere værdiløse

**Essents-Olier af
Engelsk Herkomst.**

OL. AMYGD. ESSENT. ANG.	OL. CINNAM. VER. ANG.
OL. AMYGD. ESSENT. ANG. Sine Acid Prussic.	OL. MYRISTICÆ ANG. OL. MENTH. PIP. MITCH.
OL. ANETHI ANG.	OL. MENTH. PIP. MITCH. RECT.
OL. CARUI ANG.	OL. PIMENTÆ ANG.
OL. CARYOPH. ANG.	OL. PATCHOULI ANG.
OL. CUBEBA ANG.	OL. SASSAFRAS ANG.
OL. COPAIBA ANG.	OL. CORIANDRI ANG.

OL. SANTAL. FLAV. ANG.

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ADRESSE :

ARTILLERY LANE, BISHOPSGATE, LONDRES.

FRATELLI DE PASQUALE & CO.*LARGO MUNIZIONE, MESSINA, SICILY,*

MANUFACTURERS, ESTABLISHED ON THE VERY GROWTH PLACE, FOR THE FINEST

ESSENTIAL OILS*Of Lemon, Bergamot, Sweet and Bitter Orange. Recently Awarded at the Exhibitions of***CALTANISSETTA, 1879**—A Gold Medal and 200 Liras for Invention of Machinery to the use of their Manufactory, and Silver Medal for Excellence of Produce.**MILAN, 1881**—A Bronze Medal for Excellence of Produce.**MELBOURNE, 1881**—A First Order of Merit for Excellence of Produce.**MESSINA, 1882**—A Gold Medal and 130 Liras for an ample set of Machines to the use of their Manufactory, and a Bronze Medal for Excellence of Produce.*A first trial order is quite sufficient to remain convinced of the Excellence of our Essences.*

Samples and all particulars may be had from our Wholesale Agents—

SAM'L LAMBERT & CO., DRUG BROKERS, 132 Fenchurch St., LONDON.**SODA WATER & ICE****MAKING MACHINERY**

AND ALL APPLIANCES FOR THE TRADE

BY

BARNETT & FOSTER

INVENTORS & MANUFACTURERS.

NIAGARA WORKS, 26th EAGLE WHARF ROAD, LONDON, N.

SEND FOR CATALOGUE — FORWARDED FREE.

The Catalogue above referred to comprises every requirement for the Chemist in the way of Manufacturing and Dispensing all kinds of Aerated Waters. 3 Gold, 2 Silver, and 2 Bronze Medals. International Health Exhibition, London, 1884.

SEE PAGE 102, AND COVER III-IV.

ORANGE WINE

(VIN. AURANT, P.B.)

Specially brewed for Quinine Wine, does not deposit. Is well adapted for Export, as it will keep good in any climate. In casks 13, 27, 56, 112, 140 gallons; small casks 3s. 9d. per gall., carriage allowed. In wine bottles (not less than 3 doz.), at 9s. per doz., including bottles. Cases extra and returnable. Sample, six stamps. Special quotations to large buyers.

MINERAL WATERS.

Our Mineral Waters are equal to any make. Keep well. Special attention given to Export orders; quotations on application.

SODA WATER,
SELTZER WATER,
POTASS WATER,
LEMONADE,
GINGER ALE, &c., &c.

1s. PER DOZ. NETT.

Free on rails, Hertford.

Send 6/ for a six-dozen case.

We pay Carriage on a sample case.

GEO. DURRANT & CO., HERTFORD.By Special Appointment to
H.R.H. the Duke of Connaught and the Royal Family**BOURNE WATERS.**

THE PUREST IN ENGLAND.

R. M. MILLS & CO.,

BOURNE, LINCOLNSHIRE,

MANUFACTURERS OF

SODA, POTASH, LITHIA, AND SELTZER WATERS,
LEMONADE, AND AROMATIC GINGER ALE.

4-dozen and 6-dozen Cases Carriage Paid.

Prices and Pamphlet on application. Agents appointed.

BEST TERMS FOR MINERAL WATERS.

E. GALLAIS & CO.,

VICHY WATER DEPÔT,

27 Margaret Street & 90 Piccadilly, London.

T. & F. J. TAYLOR'S



AËRATED WATERS,

Newport Pagnel.

ESTABLISHED 1835.

SODA, POTASH, SELTZER, AËRATED (without Alkali), and LITHIA WATERS, LEMONADE AND GINGER ALE.

Each Bottle is protected by a Label bearing the Signature of the Firm.

Purity and Excellence of the Water certified by Analysis by Professor ATTFIELD, Ph.D., F.C.S.

TEMPERANCE

WINE MIXTURES

For producing delicious Temperance Beverages in a few minutes.

One Shilling Bottle will make 5 quarts of Cordial.

GINGER, RASPBERRY, STRAWBERRY, BLACK CURRANT, LEMON, ORANGE, PINEAPPLE, PEPPERMINT, &c.

Sole Agency given to Chemists in towns not already represented.

Attractively put up in 6d. and 1s. Bottles. Liberal Terms. Labels and Titles protected. Write for Prices.

YOUNGER & RIDLEY, Brampton. Cumberland.

WM. BUSH, SON & CO.

Estab. over] MANUFACTURING CHEMISTS, [40 years.
YORK STREET, WALWORTH, LONDON, S.E.
IMPORTERS OF ESSENTIAL OILS.
SAMPLES AND PRICE LIST ON APPLICATION.

SOLE PROPRIETORS OF

MARIGOLDINE,

NEW COLOUR FOR BUTTER, CHEESE, &c.

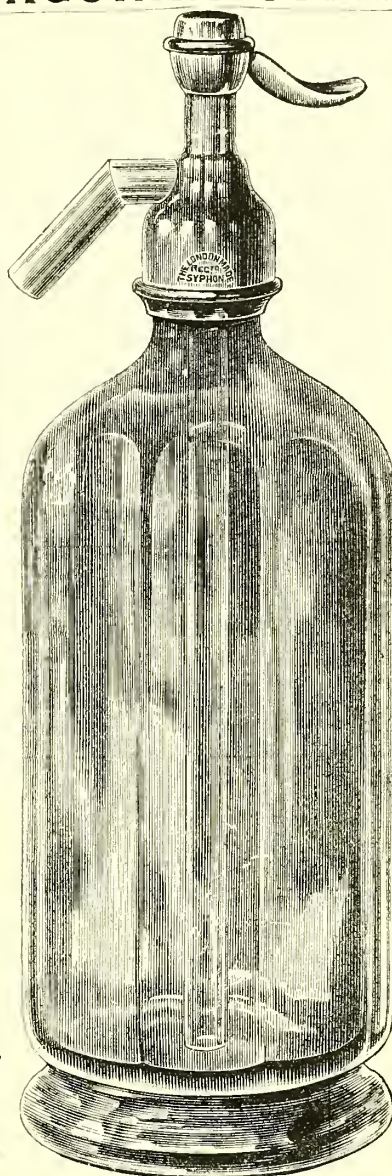
After a lengthened investigation, the Proprietors are enabled to offer this novel preparation, representing the rich colour of the Marsh Marigold, in a highly concentrated form. Being a Vegetable Extract, it will be found to impart to Butter a beautiful golden colour, free from taste, possessing its natural odour, and as pure as the herbage on which the animal feeds.

It is well known that in the Spring or Summer the rich colour of Butter is derivable from the Marsh Marigold and Ranunculi (Buttercups) of our pastures, and it has been the aim of the Proprietors to produce an article that will enable the dairyman to obtain uniformly the same results at all times of the year in the most agreeable form; and it is confidently believed that it will be found superior to every preparation hitherto sold for the purpose. Its perfect compatibility with oil and grease of every description (not watery compounds) makes it useful for many other purposes in which it is desired to obtain a rich and delicate golden tint.

Sold by Chemists, &c., and Wholesale Houses.
W. B., Son & Co., solicit inquiries, and will be happy to furnish Samples and Prices at all times.

JAMES VIDIE ET FILS

Pantin Glass Works, Paris,
PATENTEES OF THE
OCTAGONAL SYPHON.



The "Octagonal" is externally similar to the ordinary Syphon, the interior being blown of an octagonal shape by a new patent process.

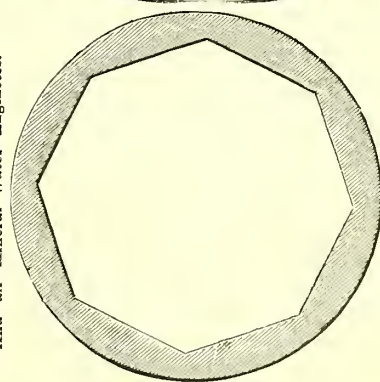
REGISTERED TRADE MARK.

REGISTERED TRADE MARK.

Gives a most brilliant and sparkling appearance to the contents, and can resist double the pressure of ordinary Vases. Greatly recommend our new tint, "AZURE BLUE," which is the best tint for Syphon Vases.

Sample sent on receipt of 2/-

Sample sent on receipt of 2/-



TO BE HAD OF

Messrs. BARNETT & FOSTER,
THE BRITISH SYPHON CO.,
And all Mineral Water Engineers.

TO BE HAD OF

Messrs. IDRIS & CO.,
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And all Mineral Water Machinists.

SOLE AGENT:

C. MELIN, 37 CRUTCHED FRIARS, LONDON, E.C.

BINGLEY'S SUPERIOR GINGER ALE,

AN AROMATIC AND NON-INTOXICATING STIMULANT.

Manufactured by a Special Process worked out by the Proprietor, by means of which the AROMATIC properties and TRUE DELICATE FLAVOUR OF JAMAICA GINGER are fully retained. It is confidently offered as a very superior article.

The following are a few of the opinions which have been expressed in reference to

BINGLEY'S GINGER ALE.

The Chemist and Druggist of January 15, 1883, says:—"We are bound to report most favourably. Very few makers have succeeded in so perfectly presenting the odour and aroma of Jamaica Ginger in a clear, bright, sparkling beverage."

The Midland Medical Miscellany of August, 1883, in a note referring to BINGLEY'S AERATED WATERS, says:—"We are particularly pleased with the Ginger Ale, which, as is not always the case, really presents the flavour of Ginger."

The British and Colonial Druggist, May, 1884:—"Mr. JOHN BINGLEY, F.C.S., Northampton, has submitted to us samples of his Ginger Ale, and it is but justice to the maker to state that we have never tasted better."

The London Medical Record, December 15, 1884, referring to BINGLEY'S GINGER ALE, states:—"The general excellence of the Ginger Ale as a non-alcoholic drink has been established to the satisfaction of the analyst. . . . BINGLEY'S GINGER ALE contains the true flavour of Jamaica Ginger."

Extract from a letter dated December 5, 1884, received from a Medical Gentleman in the West Indies, who had sent for a sample:—"Your sample of Ginger Ale came duly to hand. Upon trial I found it to be an excellent article, and as a beverage it will suit this climate of eternal summer, all the year round. It is pleasant, grateful, and tonic; as useful in the sick room as on the dining-table. One of my patients, who had become very fastidious, and could not relish either meat or drink, was persuaded to try one of your bottles of Ginger Ale (iced): after drinking it he snatched his lips, rubbed his chest, and exclaimed, 'That Ginger Ale has just fit my stomach.' He wanted more, but unfortunately I could not supply him. I intend when making my next order to send for . . . cases. I believe it will sell well here."

MANUFACTURED BY
JOHN BINGLEY, ANALYTICAL CHEMIST, NORTHAMPTON.

Specially prepared for exportation to warm climates.

All persons who are interested in such beverages, either for the Home or Export Trades, are earnestly invited to send for samples, which will be supplied GRATIS on application, either direct or through any English merchant.

ORANGE WINE.

Most suitable for making Quinine Wine because of its containing the least percentage of tannic acid possible, and being in the most brilliant condition. In casks of not less 8 gallons, 4s. per gallon, carriage paid. Extra superior quality (finest made), 4s. 6d. per gallon, carriage paid.

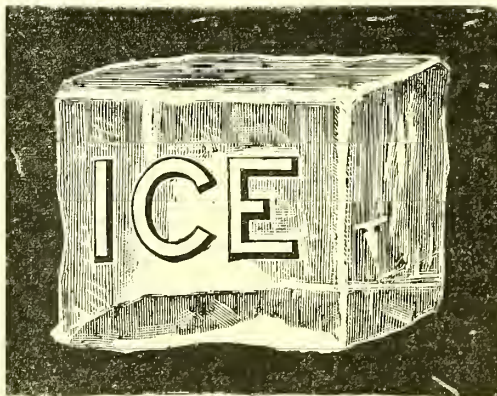
SAMPLES FREE AND CARRIAGE PAID UPON APPLICATION TO

LAMB & WATT, 46 and 48 ST. ANNE STREET, LIVERPOOL.

CASH OR USUAL TRADE REFERENCES REQUIRED WITH OPENING ORDERS.

FOREIGN MINERAL WATERS.

FREDERICKSHALL
25/- Case, 25 bts.; 40/- Case, 50 ½-bts.
APOLLINARIS WATER, 25/- Hpr., 50 bts.
" " " " 39/- Hpr., 100 ½-bts.
HUNYADI JANOS
20/- Case, 25 bts.; 50/- Case, 50 ½-bts.
SELTZER " " " 11/- Hpr., 25 bts.
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FULNA " " " 18/- Case, 20 bts.
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" " " " 27/- " 50 ½-bts.
CARLSBAD " " " 27/- " 50 bts.
KISSENGEN " " " 42/6 " 50 "
SCHWALLBACH " " " 27/6 " 50 "
HOMBURG " " " 40/- " 50 "
WILDUNGEN " " " 43/- " 50 "
CARLSBAD SALTS, ½-Bots., 20/- per doz.
" " " " 4/- Bots., 40/- per doz. " " " " 60/- per doz.



REGISTERED TRADE MARK.

NORWAY BLOCK ICE

FROM FINEST LAKES IN
CHRISTIANIA.

Professor Frankland's report with analysis:—
"The Ice is exceedingly pure, and contains less foreign matter than any water with which I am acquainted in this country."

Original Blocks
(2 to 3 cwt. each) 2s. 0d. per cwt.
1 cwt. to 2 cwt. .. 2s. 6d. per cwt.
½ cwt. to 1 cwt. .. 3d. per lb.
Under 1 cwt. 1d. per lb.
Packing free. Utmost promptitude in despatch.

W. B. HARRISON,

Importer of Ice and Mineral Waters.

6 BRIDGE ST., SUNDERLAND.

BY ROYAL LETTERS PATENT.

HASSALL & CO.'S PHOSPHO-CITRIC ACID

TO SUPERSEDE CITRIC AND TARTARIC ACIDS FOR AERATED WATERS.

Is recommended by the most eminent Physicians in Great Britain. The Best Houses in the Trade have already adopted it. It is thoroughly beneficial, and far better suited to the requirements of the Mineral Water Trade; it is free from lead and all other minerals and cheap acids: it is fully £3 per cwt. cheaper than Citric and Tartaric Acids, which mostly contain lead.

WE COMPETE ON QUALITY & PRICE.

THE PATENTEES CLAIM FOR IT, AMONGST

1. That there is no risk of prosecution, and consequent ruin of business, for lead contamination.
2. That it does not deteriorate by exposure, and will retain all its properties any length of time.
3. The price is only 10d. per lb. in 9 and 18 gallon casks; if in smaller quantities, 1s. per lb.
4. It is now an established fact that the beverages made with this acid far excel all others in keeping properties, as there is not the fungoid growth that there is with other acids.

3-oz. Sample will be sent on receipt of postage (3 stamps), or 14 lbs. will be sent on approbation.

OTHERS, THE FOLLOWING ADVANTAGES:—

5. The Essences retain their strength to a greater degree.
6. A thoroughly clear and pure beverage is obtained, whilst a greater "body" and more fruity character is imparted.
7. Time and labour saved. Being in liquid form, requires only to be measured and added direct.
8. It is entirely free from Sulphuric, Hydrochloric, Nitric, Acetic, or other cheap Acids.
9. It does not affect the metal pipes to the same extent that Citric and Tartaric Acids do.

Extract from the "ANALYST," the medium of communication between Public Analysts, for September 1884—

CITRIC and tartaric acids have long been used for acidulating or giving to mineral waters their acid flavouring, but these acids have certain disadvantages, inasmuch as their solutions cannot be kept for any great length of time without the formation of a fungoid growth, and also the extreme difficulty of obtaining them free from lead. A solution has recently been offered to the trade called Phospho-Citric Acid, the properties of which will no doubt interest Analysts. Poisonous metals were entirely absent, and so also were free sulphuric, hydrochloric, nitric, and acetic acids. The solution was clear and colourless. The quantity of phosphoric acid in a small bottle (half-pint) will amount to '95 grain, which I found to be the case in a sample of lemonade made with the above. The flavour and appearance were quite as good as that made with the organic acids. There is no reason why this article should not be used in this highly diluted form as the acid flavouring of lemonade and other mineral waters.

JAMES NAPIER'S REPORT, July 30, 1884.

I examined samples for poisonous metals, especially arsenic, lead, and copper, but could not find the slightest trace. Free sulphuric, hydrochloric, nitric and acetic acids were also absent; indeed, no free acid exists but phosphoric and citric. From analysis and careful examination, I am of opinion that, as an article to supersede tartaric and citric acids in mineral waters, phospho-citric is in many respects superior to those acids. As is well known, it is almost an impossibility to obtain tartaric and citric acids free from lead, so that this article, having no metallic contamination, is purer than those acids. I see no reason why the use of phosphoric acid, in a highly diluted form, will not prove beneficial and be much more superior to tartaric and citric acids. As phosphoric acid is a necessary constituent of the body, whilst tartaric and citric are entirely absent, it is certainly an advantage to use it, as it supplies a very important ingredient to the system and one which is too often obtained in insufficient quantities. The lemonade was entirely free from metallic contamination and fungoid growth, had a bright appearance, was particularly clear, and had a very agreeable flavour. I have no doubt but Phospho-citric Acid will be much used, as it is well suited for its intended purpose, i.e., to supersede citric and tartaric acids in mineral waters.

JAMES NAPIER, F.C.S., F.I.C., Public Analyst, London.

DR. HASSALL'S REPORT.

The Analytical Sanitary Institution, 54 Holborn Viaduct, E.C., London, June 25, 1884.

Having submitted to analysis a sample of Phospho-citric Acid, we find it to be entirely free from lead and other metallic impurities. Free sulphuric, hydrochloric, and acetic acids were also specially tested for, and found to be absent. The solution was clear, colourless, and, when sufficiently diluted, possessed an agreeable flavour. It is evident from the foregoing particulars that this preparation is well suited to supersede tartaric and citric acids, commonly employed in the manufacture of acidulated and aerated waters; while in its cheapness, freedom from metallic contamination, and in the circumstance that it would tend to preserve beverages made with it for a greater length of time (as there would be less tendency to the development of the fungoid growth frequently observed when the ordinary acids have been used), Phospho-citric Acid offers very considerable advantages.

ARTHUR HILL HASSALL, M.D.,

Author of "Food: its Adulterations and Methods for their Detection."

The above is also confirmed by EDWIN GONWY CLAYTON, F.C.S., &c., &c.

SCORES OF TESTIMONIALS MAY BE SEEN AT ANY TIME.

Sole Agents for Australia and New Zealand—

LAWRENCE & O'FARRELL, 86 Queen St., MELBOURNE.

HERBERT RAYMOND, 26 Exchange, Pitt St., SYDNEY.

HASSALL & CO., No. 1 WAREHOUSE, GT. NORTHERN GOODS DEPOT, KING'S CROSS, LONDON.

Professor JUSTUS VON LIEBIG,

Equally well known in England and Germany, says: Phosphoric Acid is a never-failing ingredient of all the organised structures of the animal body. The substance of muscular fibre, the fibrine of the blood, the pulmonary tissues, the liver and the kidneys contain an amount of phosphoric acid in chemical combination. The bones of the vertebrata contain more than half their weight of phosphates of lime and magnesia. The substance of the brain and the nerves contain phosphoric acid. The blood contains under all circumstances a certain amount of phosphoric acid.

Dr. WILLIAM B. CARPENTER

Says: Phosphorus exists in combination with aluminoid compounds, and in all animal substances composed of these. The proportions of phosphorus in the brain is considerable, being from 5 to 15 parts in 1,000 of the whole mass, or from 1-20th to 1-30th of the whole solid matter. It seems to be unusually deficient in the brains of idiots.

123 Lonsdale Street West, Melbourne, June 11, 1885.

Gentlemen,—We have tried the Phospho-citric Acid and have much pleasure in pronouncing it a decided success. It is free from any objectionable flavour or taint, and being in liquid form is a great boon, as the time and trouble in weighing and dissolving the other acids is a consideration in the busy time. We consider all aerated-water makers will find it greatly to their advantage to adopt the use of it.—Yours sincerely, R. O'DONNELLY & CO.

46 Myddelton Street, London, E.C., August 20, 1885.

Gentlemen,—After fifteen months' continuous use of your acid we have much pleasure in testifying to its excellence. We find it possesses all the properties required by us for our trade, and is at the same time a great saving in time and expense.—Yours respectfully, R. MAYER & SONS.

2, 4, and 4 Rose Lane, London, August 13, 1885.

Gentlemen,—We have now been using your Phospho-citric Acid over fourteen months, and have much pleasure in stating that we like it very much. It is certainly easier to work with than citric and much cheaper. We can find no fault whatever with it.—Yours truly, T. WATTS.

Catherine Street, Strand, May 7, 1885.

Gentlemen,—We have much pleasure in stating we have used your Phospho-citric Acid for several months, and find it a great improvement to the flavour of the lemonade, &c., also about 70s. per cwt. less than citric acid crystals. It is also a great boon in the saving of time, as it is always ready for instant use.—We are, yours respectfully, W. R. LISTER & CLEMON.

Newcastle-on-Tyne, August 23, 1885.

Gentlemen,—I have now been using your Phospho-citric Acid for a considerable time, and have much pleasure in saying that it is the best and most economical article for the purpose I have met with. In my opinion it is far superior to the ordinary acids, producing a better beverage, and far easier to manipulate.—Yours truly, W. GLENDINNING.

Cathay, Bristol, August 12, 1885.

Gentlemen,—I have used your Phospho-citric Acid daily for the last ten months with a rapidly-increasing business, to the satisfaction of my customers and profit to myself, being only about half the cost of the other acids and ready for instant use; it gives me every satisfaction.—Yours respectfully, C. E. BEAVIS.

3 Sussex Street, Blyth, November 12, 1884.

Gentlemen,—I am happy to inform you that I have tried your Phospho-citric Acid, and I find it quite as good as you represent it to be. It saves labour, and is little above half the price of citric and tartaric acids. The cask I ordered last week is to hand.—I remain, yours respectfully, THOMAS FORSTER.



The burning of Langdale's Distillery on Holborn Hill by the Lord Gordon Rioters in 1780, of which an interesting account will be found in Charles Dickens' "Barnaby Rudge," Chaps. 62 and 63.

E. F. LANGDALE, WHOLESALE CHEMIST, AND ESSENCE DISTILLER.

Also Importer of every description of Essential Oils, Natural and Artificial Flavouring Essences, Concentrated Infusions and Tinctures, Importer of finest descriptions of Mexican and Bourbon Vanilla, French Harmless Vegetable Colours, &c.

ESSENCE DISTILLERY & LABORATORY,

72 & 73 HATTON GARDEN and 5a CROSS STREET, HOLBORN HILL, LONDON, E.C.

Bonded and Export Factory (by special permission of Her Majesty's Honourable Board of Customs), No. 1 WAREHOUSE, LONDON DOCKS, E.

Finest Concentrated French Essences, No. 24 Strength

	s. d.
Bouquet.. .. per lb.	4 0
Cassie "	4 0
Eglantine "	4 0
Frangipani "	4 0
Heliotrope "	4 0
Jasmin "	4 0
Jockey Club "	4 0
Magnolia "	4 0
Marechale "	4 0
Millefleurs "	4 0
Mousseline "	4 0
Orris Root "	4 0
Patchouli "	4 0
Reine des Alpes "	4 0
Rondeletia "	4 0
Rose "	4 0
Rose Geranium "	4 0
Spring Flowers "	4 0

Finest Concentrated French Essences—continued.

	s. d.
Tonquin Beans.. per lb.	4 0
Tuberose "	4 0
Vanilla "	4 0
Verbenæ "	4 0
Vertiver "	4 0
Wall Flower "	4 0
Wood Violets "	4 0
&c., &c.	
Shipped in Bond from E. F. Langdale's Distillery and Export Bonded Factory, No. 1 Warehouse, London Docks, under Customs Seal.	
Packed in Bottles of any capacity, not less than 30 lbs. assorted allowed to be packed in Bond. Bottles and cases charged.	

E. F. Langdale's Prize-Medal Pure Quintessences.

Distilled from Herbs, Fruits, and Spices, gathered in their bloom and freshness.

	Per gross
Vanilla	In 1-oz. stoppered bottles, 168/
Lemon	" corked " 156/
Almonds	In 2-oz. stoppered " 88/
Maraschino	" corked " 84/
Raspberry	In 1-oz. stoppered " 52/
Strawberry	" corked " 48/
Ginger	In 1-oz. " 30/
Peach Kernels	Packed in bandsome wood boxes holding 12 bottles.
Brandy	If in boxes with glass lids, 3d. per doz. extra.
Nutmegs	
Orange	
Celery, &c.,	

SPECIAL QUOTATIONS FOR QUANTITIES.

Spirit Flavours.

The attention of consumers in Australia and India is particularly called to these very useful and excellent flavours. One pound of either of these essences to 50 gals. of plain spirit will make immediately a fine Brandy or Old Tom, &c., without the use of a still.—See *Lancet* Report.

	s. d.
Ess. Old Tom Gin .. per lb.	6 6
Ess. London Gin "	6 6
Ess. Cognac Brandy "	7 0
Ess. Irish Whisky "	6 6
Ess. Jamaica Rum "	7 0
Ess. Arrack Punch "	10 0
Ess. Hollands "	8 6
Ess. Geneva "	10 0

TINCTURES

Prepared under our own supervision strictly according to the Formulae of the British or Foreign Pharmacopoeia, from 1s. to 2s. 6d. Price Lists post free on application. If 150 lbs. and upwards assorted Tinctures are taken, special discounts allowed. 500 lbs. and upwards delivered free to ship in London.

C. W. FIELD, MANUFACTURING CHEMIST, SPICE, SEED, & DRUG GRINDER,

OFFERS:—

CAPSICINE

GINGERINE

SAPONINE

OIL OF CLOVES

ESSENCES.

FRUIT

AND

ETHERS

Address—Cambrian Mills, Wood Street, LIVERPOOL.

KRONENQUELLE

CROWN SPRING (Registered).

THE NEW NATURAL MINERAL WATER for the Treatment of DISEASES of the KIDNEYS & BLADDER.
SPECIFIC FOR GOUT.

This natural Lithia Spring, although only recently brought before the Medical Profession, has gained a high reputation on account of its quick and decided action even in most obstinate cases.

Dr. Mortimer Granville, M.R.C.P., in his new work, "Gout in its Clinical Aspects," writes:—"Vichy, Vals, and the other best-known waters are all apt to cause flatulency, while the purging waters are, according to the view I take of gout, distinctly contra-indicated, because they draw fluid away from the kidneys, which it is all-important to flush. The only water I prescribe is the Kronenquelle, etc."

Through all Wholesale Houses and Chemists, or from the

Sole Consignees: W. SCHACHT & CO., 26 Finsbury Pavement, London, E.C.

CAUTION.—Messrs. W. SCHACHT & CO. beg to inform the Trade generally that all cases are labelled "KRONENQUELLE (Registered)," together with their name and address printed in BLUE INK.

TELEGRAPHIC ADDRESS—
"Calisayin, London."

A FEW OF

LORIMER & CO., Manufacturing
Chemists
and Wholesale Druggists,
Hargrave Park Road,
LONDON,
N.

TELEPHONE
NUMBER,
7524.

LORIMER'S SPECIALTIES

PURE
COD LIVER
FINEST **OIL**, QUALITY.

8-oz., 8/; 16-oz., 14/; 32-oz. bottles, 24/ 6 doz.
Gall., 7/; 1-gall. bots., 93/ doz.; orig. cask,
6/6 gall. 1/2-pint, 7/6; 1-pint, 12/6 doz.

AWARDED
SIX GOLD
AND
PRIZE MEDALS
In One Year (1884),
LONDON & CALCUTTA.

MENTHOL
(NEURALGIC
CRYSTALS). **CONE,**

In Turned Wood Screw-Top Cases, or in
Bottles, to retail at 1/6 and 1/ each,
3/6 and 7/ dozen.

IN accordance with
the request of many
Chemists
LORIMER'S
LEADING
SPECIALTIES
will in future be sup-
plied without any
indication of *Retail*
Prices on Labels,
packages, or advertis-
ing matter, so that
the Retailer can fix
his own price and
secure the highest
profits attainable. In
small towns agents
are appointed who
have the whole trade
of their district with-
out opposition.

Full List on appli-
cation.

QUININE
AND **IRON**
TONIC,

8 and 16 oz. Bottles, containing 16
and 32 full doses, 8/6 and 15/ doz.

Parrish's
Gold Medal
CHEMICAL FOOD

1/2 1 lb bots.
4/3 6/3 10/9 doz.
Bulk, lb., 8d.
cwt., 50/.

LORIMER'S
QUININE
WINE

Has been examined and approved at
Somerset House by the Inland
Revenue Authorities.
Wine bottles, 18/ doz. Imperial
Pints, 16/; Imperial Half-pints, 8/4.

COMPOUND
SYRUP OF
THE
Hypophosphites

Slightly Alkaline,
S. Gr. 1.35.

1/2, 1 lb., 9/6, 16/ 30/
doz. In bulk, 2/ lb.

Each teaspoonful
(fluid drachm) contains:
Hypophosphites grs.
Lime 2
Sodium 1 1/2
Potassium 1
Iron 2
Manganese 1/2
Quinine 1/2
Strychnia 1-160

Samples free on appli-
cation.

LORIMER'S
Cascara Sagrada
Perfect Castor Oil
Transparent
Cement
Chlorate Potash
Pearls
Extract Malt
Extract Malt and
Cod Liver Oil
Cigarettes
(Cubebs, &c)
Ferrum
Dialysatum
Furniture Cream
Seidlitz Powders
Smelling Salts
Perfumery
&c. &c.

ESSENCES

(PURE FLAVOURING),
Distilled from
Spices, Herbs,
Fruits, &c.

For Culinary Purposes.

1/2-oz. bots., 2/9 doz., to
retail at 6d. each.
1-oz. bots., 4/8 doz., to
retail at 1/ each.
2-oz. bots., 8/ doz., to
retail at 2/ each.
4-oz. bots., 14/ doz., to
retail at 3/ each.
In 1/2 or 1 doz. Fancy
Boxes, assorted or
otherwise.

1, 2, and 4 oz. may be
had with Sprinkling
Stoppers at 7d. doz.
extra.

Concentrated
QUININE
AND
IRON.

Bottles of 40 and 80 doses, 2/9 and
4/6 each.
24/ and 42/ doz. bottles.

LORIMER'S
CORN CURE.

Without
our 11/ stamp,
6/9 doz. Bk.,
12/ lb.,
6 wds.,
11/ lb.

As
supplied
to H.M.
Government.
British Pharm.,
1885.

CITRATE OF
IRON & QUININE

1-oz. bots., 1/3
each.
Bulk, 1/2 oz.

Containing
all the Salts
obtainable from
fresh Ripe Fruit.
EFFERVESCING
Grape Juice Saline

In Glas., stoprd. Bots.
to retail at 1/6,
10/ doz., 50/ doz.,
3/4 doz. Bulk, 1/
lb., 11d.

LIQUOR FOR
QUININE AND
IRON TONIC

Lb., 4/9.

One part added to ten parts distilled
water produces a *permanently brilliant*
Tonic, containing a full 5-grain dose
of the P.B. citrate in each half-ounce.

MANUFACTURERS OF

CITRATE of IRON and QUININE and all Scaled Preparations.

CITRATE of MAGNESIA and all Granular Preparations.

SOLUBLE, FRUIT, & ARTIFICIAL ESSENCES.

Concentrated Infusions and Pharmaceutical Preparations.

DISTILLERS AND IMPORTERS OF ESSENTIAL OILS AND PERFUMERY.

SHIPPERS OF ALL SPIRITUOUS PREPARATIONS IN BOND.

SPECIAL AGENTS FOR CAVALLIER FRERES, PERFUMERY DISTILLERS, GRASSE.

Purest Drugs and Preparations, in *all sizes*, put up in best style and at prices including Bottles, Boxes, &c., lower than bulk prices of Wholesale Druggists.

HARD WATER.

"THE QUEEN," of October 24th, 1885, says :—"For softening hard water use the

'ANTI-CALCAIRE' POWDER,

QUITE HARMLESS AND INEXPENSIVE."

Sold by the Patentee, P. A. MAIGNEN, 32 St. MARY-AT-HILL, EASTCHEAP, LONDON,
In Tins at 2*l.*, 6*l.*, 1*s.*, and 2*s.*, with instructions printed on the tins. *Liberal Discount to Wholesale Houses.*

MAIGNEN'S Patent 'FILTRE RAPIDE.'

TESTIMONIAL FROM LORD WOLSELEY.

I have much pleasure in stating that Mons^r. Maignen's "Filtre Rapide," which was used by our troops in the Expedition up the Nile, gave very satisfactory results indeed. It filtered the water both quickly and well, and was much valued by our soldiers.

3 Hill Street, W., July 28, 1885.

(Signed)

WOLSELEY.

Full particulars in Pamphlet, "Water, Preventable Disease, and Filtration," to be had from the Author,
P. A. MAIGNEN, 32 St. Mary-at-Hill, EASTCHEAP, LONDON.

DOULTON & CO., LAMBETH, LONDON, S.E.

MANUFACTURERS OF EVERY DESCRIPTION OF

WATER FILTERS.

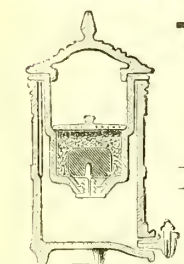
NEW PATENT
Manganous Carbon FILTERS.
Boudoir and Table FILTERS.
Pocket and Syphon FILTERS.

House Supply or Cistern FILTERS.
Patent Granular Charcoal
FILTERS.
Refrigerator FILTERS.

MAIN SERVICE FILTERS

FOR INTERMITTENT OR CONSTANT SUPPLY.

See Reports, Analyses, &c. Detail Lists on application. To be
obtained of all Dealers.



DOULTON & CO., LAMBETH, LONDON, S.E.

DEPOTS:—100 Soho Street, LIVERPOOL; Granville Wharf, BIRMINGHAM; and 6 Rue de Paradis, PARIS.

M. A. CRAVEN & SON, WHOLESALE AND EXPORT CONFECTIONERS,

MAKERS OF

Medicated Lozenges, Refined Liquorice, Jujubes, and every description of Confectionery,
IMPORTERS AND MANUFACTURERS OF LEMON, ORANGE, AND CITRON PEELS.

EBOR CONFECTIONERY WORKS. YORK.

Lozenges of all descriptions made from Customers' private formulæ (or ingredients), and stamped with
any name or device.

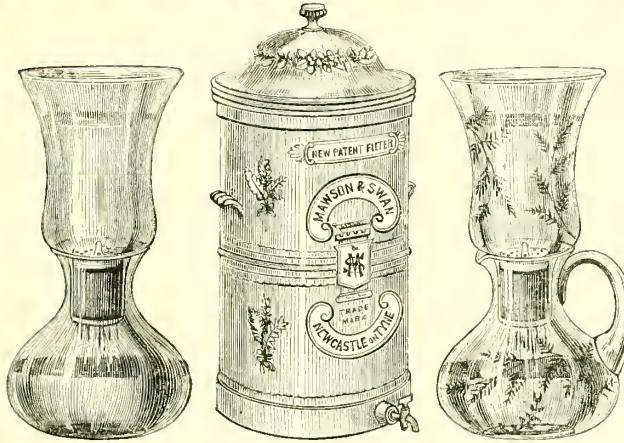
SPECIALITIES—Cough, Peppermint, Rose, Musk, Bouquet, Cachou, and all kinds of Medicated Lozenges.
ESTABLISHED 1843. PRICE LIST ON APPLICATION.

MAWSON & SWAN'S NEW FILTERS.

SUITED TO EVERY CLIMATE.

THE MEDIUM

Is arranged in layers of successive fineness, supported on & covered by glass wool, held in position by perforated plates mechanically secured, which can be removed for cleansing or renewing the medium.



ADVANTAGES.

Perfect graduated Action.
Simplicity. Security.
Easily and economically renewed at home.
No block to become worn out, choked, or channelled.
No tubes or joints to allow leakage.

Retail Prices:—Plain Glass4/6 | 1 2 3 4 6 gall. | Engraved Glass6/6. Subject to liberal Wholesale Discounts
Do. with Handle 5/6 | 14/6 21/ 27/ 35/ 50/ | Do. with Handle7/6.

EL NUEVO FILTRO, PATENTE DE MAWSON & SWAN,

El mejor filtro para separar y remover los gérmenes de enfermedades contagiosas.

No habiendo tubos u otras uniones que podrian dar lugar á mermas, cada gota de agua ha de filtrarse antes de poder caer al receptáculo.

El material filtrante puede ser renovada en casa sin la menor molestia.

NO hay ninguna pieza sólida expuesta á gastarse ó á obstruirse.

El nuevo filtro de patente es apropósito para todos los climas.

Precios al por } Cristal Liso 5.60 | 1 2 3 4 6 gal. | Con decoraciones ... 7.85. Con descuento liberal
menor:— } Idem con asa 6.90 | 18.10 26.25 33.75 43.75 | Idem con asa 9.40. al comercio.

MAWSON & SWAN, 20 WEST GRAINGER ST., NEWCASTLE-ON-TYNE.

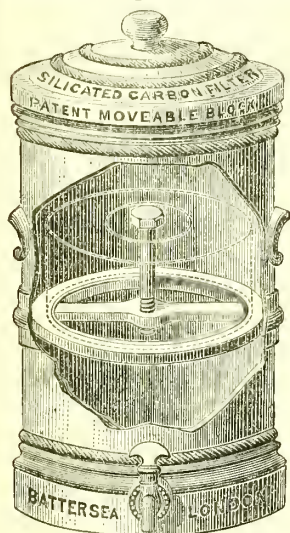
Telegraphic Address—"Weddell Newcastle-on-Tyne."

WHOLESALE AGENTS.—London: Messrs. S. Maw, Son & Thompson; Messrs. Bentley & Sons; Messrs. Bourne, Johnson & Latimer; Mr. William Toogood; Messrs. Lynch & Co. Manchester: Messrs. Woolley, Sons & Co. Liverpool: Messrs. J. H. & S. Johnson; Messrs. Symes & Co. Edinburgh: Messrs. Duncan, Flockhart & Co. Glasgow: Glasgow Apothecaries' Co. Bombay: Kemp & Co., Lim. New Zealand: Kemphorne, Prosser & Co., Wellington, Dunedin, Christchurch, and Auckland.

SILICATED CARBON

PATENT MOVEABLE-BLOCK FILTERS.

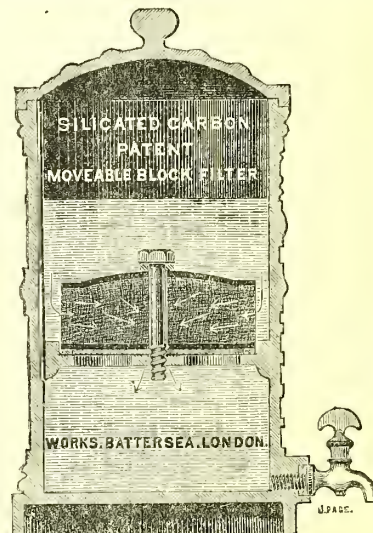
These Filters are constructed on Scientific principles, and can be renewed or repaired by the user without returning to the maker. They possess all the advantages of those with fixed filtering mediums, while the simple removal of the Silicated Carbon Block leaves the *whole* of the interior of the Filter open for inspection and cleansing. The working parts are stoneware, and corrosion is impossible.



(Elevation with Block removed.)

NO LOOSE PAN OR INNER VESSEL
TO CAUSE BREAKAGE.

The block being non-porous on the top and edges, an *upward* direction is given to the water, which thus passes through a greater thickness of the Silicated Carbon, as shown by the arrows in drawing.



(Section.)

The Silicated Carbon Block can be instantly removed, leaving the whole of the interior of the Filter *open* for inspection and cleansing.

To Cleanse the block, plunge it into boiling water, and well scrub it with a hard brush.

Extra blocks can be supplied with each Filter. All parts being interchangeable can be replaced in case of accidents.

This Patent can be adapted to all patterns manufactured by the SILICATED CARBON FILTER CO. *without increased charge.* In ordering please state "*with patent moveable block.*"

Domestic Filters (as above), in Cream-coloured Stoneware, with Plated Taps and Patent Moveable Blocks:—

No. 27. O. $\frac{1}{2}$ gal. 10/6 each.	D. 6 gals. 42/- each.
A. 1 " 14/6 "	E. 8 " 52/- "
B. 2 " 21/- "	F. 12 " 70/- "
C. 4 " 32/- "	

Dining Room Filters, in Marbled China, with Plated Taps and Patent Moveable Blocks:—

No. 22. A. 2 gals. 35/- each.
B. 5 " 80/- "

Refrigerative Terra Cotta do., do.:—
No. 25. 2 gals. 31/6 each.

All makes of Filters can be refitted on this principle, 1 gal. 8/6, 2 gals. 10/-, 4 gals. 12/- each. Larger sizes in proportion.

SILICATED CARBON FILTER COMPANY.

WORKS: BATTERSEA, LONDON.

SILICATED CARBON FILTERS.

SYPHON FILTERS FOR TRAVELLERS.

By means of these Filters pure and perfectly wholesome water may be drunk from any pond or stream by simply immersing the Filter therein and drawing the water through the tube by suction.

Each of these portable Filters may be



No. 20.

used as a Syphon by placing it in a vessel of water, then drawing the water by the mouth, and allowing the flexible tube to hang over the side below the Filter. When once set in operation their action is continuous.

- | | |
|---|-------|
| A.—Pocket Filter, $2\frac{1}{2}$ inches diameter, in porcelain, with glass mouthpiece, in decorated metal-box | s. d. |
| .. .. . | 2 6 |
| B.—Ditto, $3\frac{1}{2}$ inches diameter, in best stoneware | 5 0 |
| C.—Emigrant's, 5 inches diameter, with silver-plated tap | 12 0 |
| G.—Pocket Filter, for carrying over shoulder, as supplied to the Forces in Abyssinia and Zululand, and to the Ashantee and Egyptian Expeditions | 3 6 |
| H.—Ditto, nickel-plated, designed by Major Fraser, R.E., and specially recommended by the Horse Guards for Officers' kits | 5 0 |

FILTERS.

TABLE FILTER,

Made of stout glass, in 1, 2, and 3 pint sizes, the filtering medium being securely fitted into the bell-funnel, so that it is not liable to become loose, or to allow unfiltered water



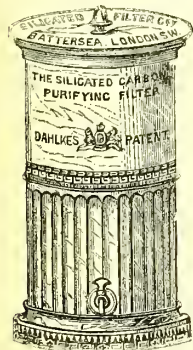
No. 24.

to pass. This Filter is peculiarly suited for the Bedroom and for Table use, affording a ready and simple means of obtaining at any time freshly-purified water.

PRICES.

No. O, 2s. 6d.; A, 4s.; B, 5s. 6d.

Engraved Vine Pattern—O, 3s. 6d.; A, 5s. 6d.; B, 7s. 6d.



DINING-ROOM FILTER,

No. 22.

WITH PATENT MOVEABLE BLOCK.

MADE IN MARBLED CHINA.

PRICES.

- | | | |
|------|----------------------|-----|
| A .. | Two Gallons | 3s. |
| B .. | Five Gallons | 8s. |

The large size (B) is specially adapted for Hotels, Refreshment Rooms, Luncheon Bars, &c.

REFRIGERATOR FILTER, NO. 25,

WITH PATENT MOVEABLE BLOCK.

Made in Porous Terra-Cotta Ware,

Which acts with remarkable power as a cooler, and renders this Filter invaluable, especially in Tropical Climates,

AFFORDING A

COOL DRAUGHT OF PURE WATER.

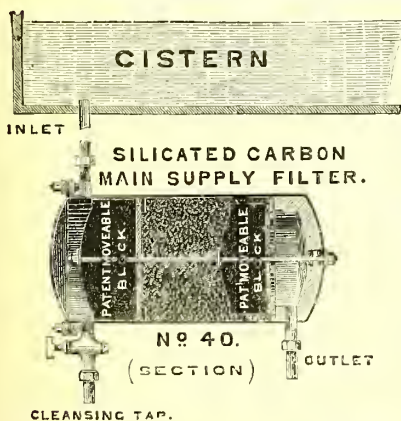
Price, with Silver-plated Tap 81s. 6d.
Capacity Two Gallons.

Specially adapted for Tropical Climates.



MAIN SUPPLY FILTER, NO. 40,

WITH PATENT MOVEABLE BLOCKS,



CLEANSING TAP.

FOR MINERAL WATER MANUFACTORIES,

As used by Messrs. Schwebbe, London, Liverpool, Glasgow, &c.; and most of the large makers.

Also for Schools, Hospitals, Mansions, &c.

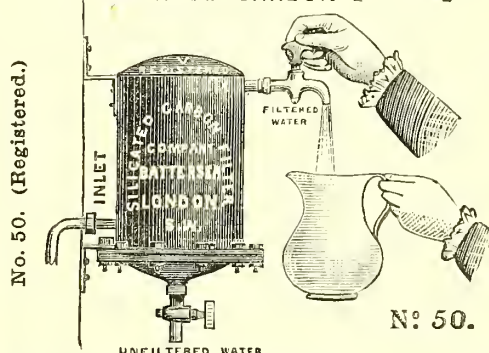
PRICES.

- | | |
|------------------------------|--------|
| For $\frac{3}{4}$ -in. Pipes | £6 6s. |
| „ 1-in. Pipes | £9 9s. |

CONSTANT SUPPLY FILTER,

WITH PATENT MOVEABLE BLOCK.

SILICATED CARBON [TRADE MARK]



No. 50. (Registered.)

No. 50.

These Filters require no attention from servants, as they are always filled and ready for use. The act of drawing Unfiltered Water cleanses the Filter, by washing away the impurities collected on the carbon.

Complete, Price £3 3s. each.

FOR FULL PARTICULARS WRITE TO THE

SILICATED CARBON FILTER COMPANY,

CHURCH ROAD, BATTERSEA, LONDON, S.W.

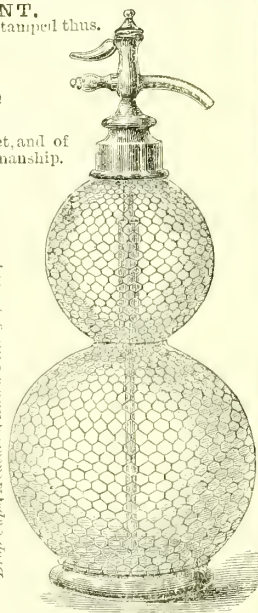
IMPORTANT.
All our Apparatus are Stamped thus.



Prices for Syphons.—Short Levers, 22 6; Long do, 24 6; Jetted, 20 6; Jetted or Diamond Vases, 1 1; Superior Nickel-plated, 4 6; Strongly Silver-plated, 5 9; per doz.

Prices for Seltrögenes.—3-pint size, wire covered, 13 1; 4-pint do, 13 6; 5-pint size, wire-covered, 19; 6-pint do, 19 6; 8-pint size, wire covered, 30; 9-pint do, 30 6. Liberal discount. With Silver-plated Top of Wire, 5 7 extra.

Drawn Cups, Measurers, Extra Editions on Wire.



Seven Gold, Silver, and other Prize Medals for very Superior Quality,
make, and Special Excellency of Finish.
Metal beautifully Polished, and warranted free from Lead.

ANNUAL SUBSCRIPTION, POST FREE, 6s. SAMPLE COPY, 8d.

ESTABLISHED 1873.

*The Pioneer Journal and Representative Organ of the Mineral
and Aerated Water Trades.*

PUBLISHED ON THE 18TH OF EACH MONTH.

J. GILBERT SMITH, 143 Queen Victoria St., LONDON.

LA BOURBOULE

AN EMINENTLY RESTORATIVE MINERAL WATER.

Contains Chloride of Soda, Bicarbonates, Arsenics (28 millig. of arseniate of soda per litre).

Dose : Half a glass to three glasses per day before or during meals.

Anglican Divine service on Sundays.
 London: GALLAIS & CO., 27 Margaret Street, W. INGRAM & ROYLE, 119
 Queen Victoria Street, E.C. WILLIAM BETTS & SONS, 22 Henrietta Street,
 Cavendish Square. Liverpool: EVANS, SONS & CO.

RANDALL'S BLACK CURRANT LOZENGES.

Plain Black Currant, old square	--	--	2	6
" " " rough oval	--	--	2	6
Black Currant and Ipecacuanha	--	--	2	6
Black Currant and Tannin..	..	..	3	0
Black Currant Voice (warm astringent)	..	..	3	0
Black Currant Cough Lozenges *	..	..	3	6

(* Ipecac. and Morph., strength as "B. P.")

In Bottles, 1 lb., 2 lbs., 4 lbs., and 7 lbs. For Exportation, in soldered tins, of any size. From EDWARDS, London; through any Wholesale House; and from the Manufacturers.

RANDALL & SON, Southampton.

Who will forward Samples by post on application.

Also, **BROWN COUGH LOZENGES**, 2s.; 7 lbs. stamped with name free, and
MUSK LOZENGES (*Special*), 2s. 6d.

N.B.—Medical Lozenges of every kind,

N.B.—*Medical Lozenges of every kind,*
Including those of the Pharmacopœia of the Hospital for Diseases of the
Throat, London.

(TITLE REGISTERED)

Obtained the HIGHEST AWARD at the International Health Exhibition, London, 1884.



The high reputation this bottle has achieved is due to the fact of its being in every particular the most perfect yet introduced; and when compared with others in the market it stands pre-eminent. It is most simple in its working parts, therefore the least liable to get out of order; it is the most easily opened, the lightest pressure on the handle being sufficient; it produces a more highly-charged gaseous water than is usually obtained from syphons; it compares most favourably in appearance with any, and the metal top being entirely free from lead, the prejudice against syphon drioks is at once removed, as the liquid passes over pure tin only.

All our Syphons are now fitted at the base with a groove, so that drips from the spout that run down the sides are prevented from soiling the table. See *drawing*.

NOTE.—Siphons made with our patent foot for collecting excess of liquid dripping from the spout after use are supplied at no extra charge, and will be found of great utility in preventing stains, &c., upon table linen. This is a desideratum long been wanting, particularly for private-house use. Send for sample; forwarded upon receipt of 2s.

Any name, crest, or trade-mark put on the glass by an improved acid process, at from 18s. to 24s. per gross. There is a three-fold advantage in this, as it forms a continual advertisement, is a great ornament, and a preventive of fraud. The plate for engraving costs extra from 5s. upwards, according to the artistic device required.

PRICES (WHITE, BLUE, GREEN, OR AMBER):—

				By the gross,		Less than 1 gross,	
				per doz.		per doz.	
Quart size	...	...	...	£1	2 0	...	£1 4 0
Pint size	...	...	...	1	1 0	...	1 3 0
Half-pint, Pear shape	...	...	...	1	0 0	...	1 2 0
Octagonal vases, any colour (in-	...	...	...	
cluding Azure Blue)	...	...	...	1	4 0	...	1 6 0

Tops, nickel-plated, from 5s. 6d. per doz. extra. Tops, silver-plated and burnished from 9s. per doz. extra. A charge is made for packing, except when ordered in our patent lin cases (holding one dozen each, price 2s. 6d. each).

Please Note.—B. & F. are the only firm manufacturing Syphons in England that do not supply them filled, and so compete with their customers' trade.

BARNETT & FOSTER,
MINERAL WATER ENGINEERS.

Manufacturing Chemists, and General Providers for the Aerated Water
Wine, Beer, and Cyder Trades,

"Niagara Works," 26th Eagle Wharf Road, London, N.

Send for Price List of Soda-water Machinery and Accessories.

See also page 92, and Cover iii. and iv.

SAPERE AUDE :— "Water is the great carrier of the infective germs." "It is the water to which we must look."—THE LANCET, June 30, 1883.

JUDSON'S "PERFECT-PURITY" FILTERS

AND

"GALVANO-ELECTRIC" FILTERING MEDIUM.

(UNDER FOUR PATENTS GRANTED 1884 and 1885.)

RENDER water PERFECTLY Pure; the purifying action of this Medium INCREASES with the IMPURITY of the water—the reverse is the case with ALL other mediums.

ILLUSTRATED PAMPHLET AND CATALOGUE POST FREE.

THE FILTERING MEDIUM.

Vital principle of Filters.

The filtering medium embodies the vital principle, so to speak, of the filtering apparatus. Some kinds of medium actually nourish animalcules, and impregnate water with many kinds of impurity. Of the various sorts of medium in general use we may mention the following:—Medicated felt, porous stone and pottery, sponge, leather, prepared paper, compressed blocks of carbon, spongy iron, silicate of magnesia, animal charcoal, &c. Among these felt, sponge, leather, and compressed blocks of animal charcoal should always be avoided: they are dangerous. They harbour and propagate animalcules and noxious vegetable growths to an alarming extent. Animal charcoal, whether loose or compressed, is a most unsatisfactory medium. It is obtained by heating bones from all kinds of sources and in all conditions—sometimes diseased during life, or more or less rotten through *post-mortem* decay. If this heating or charring be insufficiently carried out (as to which there is no guarantee whatever), the charcoal retains sufficient animal matter to render it a source of positive danger, and most of the commercial varieties contain sufficient animal matter to render pure water as impure as if contaminated with sewage.

Various Media.

Composition of the "Galvano-Electric" Medium.

It is well known, of course, that certain compounds of iron have a very destructive effect on organic matter—as shown by iron moulds on textile fabrics—and chalybeate waters containing these iron compounds naturally are perfectly free from organic impurity; but for domestic use it is essential that the water filtered through such compounds should afterwards have the iron in it removed. This removal is perfectly effected by the "Galvano-Electric" Medium.

The "Galvano-Electric" Medium is prepared from **mineral substances only**, which *cannot*, from the mode of their natural formation, contain even vegetable, much less animal, matter. To the beneficial action of that medium there is therefore no counter-action of questionable utility, as is the case with other filtering materials, which have any small amount of good effect greatly counterbalanced by useless or dangerous accompaniments.

Conclusion.

Water—health-giving, life-promoting water—if neglected and defiled, becomes, inversely, disease-propagating, wide-spreading death. In this manner is the *absolute necessity* for domestic filtration severely enforced by the immutable laws of nature. Therefore are we surely justified in maintaining that the benefits are incalculable to be derived from the use of our "Perfect-Purity Filters" and "Galvano-Electric" Filtering Medium.

A VISIT TO OUR SHOW-ROOM AT N^o. 58 SOUTHWARK STREET, LONDON, S.E., IS EARNESTLY SOLICITED.

Pamphlet and Catalogue Post Free on Application to 77 Southwark St.

CONCENTRATED PATENT
PEPTONISED MILK
 AND
PEPTONISED MILK AND COCOA.

These two preparations are made with pure rich PRE-DIGESTED Country Milk, and, by mere dilution with hot water, afford a delicious restorative beverage the assimilation of which requires no digestive effort.

SAVORY & MOORE, LONDON.

Tins, 1s. 6d. and 2s. 6d. Obtainable Everywhere.

SPECIAL NOTICE & CAUTION.

BRAND & CO.

The Original Manufacturers of Essence of Beef (green label under wrapper), and other Specialities for Invalids, have

NOT REMOVED

From their **SOLE ADDRESS**, No. 11
 LITTLE STANHOPE STREET, MAY-
 FAIR, W, and caution the trade to

BEWARE of IMITATIONS.



HARVEY'S SAUCE

For **FISH,**
STEAKS,
GAME,
 &c.

CAUTION.

Each Bottle
 of this celebrated
 Sauce, prepared from
 the *Original Recipe*, bears
 the well-known Label, signed—

Elizabeth Lazenby

This Label is protected by PERPETUAL INJUNCTION in Chancery of the 9th July, 1858, and without it none can be GENUINE.

Prepared only by **E. LAZENBY & SON, LONDON.**

And sold Retail by Grocers, Oilmen, Italian Warehousemen, &c., throughout the Kingdom.

FOR INVALIDS & PERSONS OF WEAK DIGESTION.

ESSENCE OF BEEF.
 AND OTHER SPECIALITIES.

IN TINS & GLASS BOTTLES.

Price List on application to the

LONDON MANUFACTURING CO.,

59 to 61, HATTON GARDEN LONDON, E.C.

Ask for **LION SAUCE.**

KREOCHYLE

KREOCHYLE IS A PURE LIQUID MEAT, CONTAINING, IN ADDITION TO THE ORDINARY "MEAT EXTRACTIVES," THE WHOLE OF THE SOLUBLE ALBUMEN OF THE MEAT IN A FORM SUCH THAT IT IS ABSOLUTELY SELF-DIGESTIVE.

FOOD AND
STIMULANT

BARFF & WIRE

FOR INVALIDS
AND INFANTS.

PRICES—Retail, 5/ per pint; 2/9 per $\frac{1}{2}$ pint;
1/6 per $\frac{1}{4}$ pint.

HAND-BILLS, SHOW-CARDS, AND SAMPLES SENT WITH
EVERY ORDER IF DESIRED.

LIQUID MEAT.

BY ROYAL LETTERS PATENT.

BARFF BORO-GLYCERIDE

FOOD PRESERVER.

FOR MEDICAL & SURGICAL PURPOSES.

FOR PARTICULARS CONCERNING KREOCHYLE AND BARFF BORO-GLYCERIDE APPLY TO THE

KREOCHYLE COMPANY, 9 FARRINGDON ROAD, LONDON, E.C.
TO BE OBTAINED OF ALL WHOLESALE HOUSES.

GEO. MASON & CO.'S SPECIALITIES FOR INVALIDS,

ESSENCE OF BEEF,
CONCENTRATED BEEF TEA,
MEAT LOZENGES, &c.

As Supplied to the leading London Hospitals.

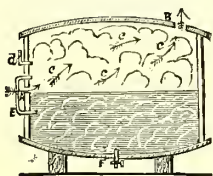
A Trial of our Preparations will at once prove
their superiority over all others, added to which
they are the cheapest.

PRICE LIST POST FREE.

417 KING'S ROAD, CHELSEA, LONDON, S.W



TRADE MARK.



NEW METHOD OF MAKING VINEGAR, BY THE REVOLVING APPARATUS (Michaelis' Patent).

For further particulars

See the Chemists' and Druggists' Diary, 1884, page 274,
OR APPLY TO

PAUL ROTHERMEL,

105 (late of 27) LEADENHALL ST., LONDON.

LIVER REMEDY.

PREPARED

DANDELION

(LEA & PERRINS').

MADE WITH PURE

DANDELION ROOT & THE FINEST COFFEE.

Sold in Tins, at 8d., 1s. 6d., & 3s. each.

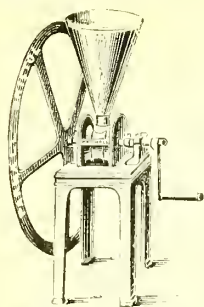
CARBOLINE (TOOTH PASTE)

1s. 6d. per Pot.

Best known Cleanser, Preserver, and
Beautifier of the Teeth.

Supplied by the Patent Medicine Houses on the
usual terms, or the Makers,

GEORGE & WELCH, WORCESTER.



COFFEE MILLS. DRUG MILLS. SPICE MILLS.

MAKERS—

WM. PARNALL & CO.

108 VICTORIA ST., BRISTOL.

"laden with the scent of flowers,
And breath of odorous Spring."

SPINNER'S TEAS.

A company of Merchants are now selling through SPINNER & CO. the choicest Teas that come from India and China at 2/8, 2/4, 2/, and 1/8 a pound, in packets only. These are the perfection of Teas, and will please the most fastidious.—Agents wanted in every town and village. For Terms apply to SPINNER & CO., 60 Strand, London.

SPINNER & CO., London and Liverpool.

Telegrams—PACIFICUS, LONDON.

PEARSE & WHEATLEY, 42 MINCING LANE, LONDON, E.C. WHOLESALE TEA AND COFFEE DEALERS.

SPECIAL BLENDS OF TEA— No. 1, 1/ No. 2, 1/ No. 3, 1/3 No. 4, 1/6 No. 5, 1/9 No. 6, 2/ X, 2/4

Duty-paid parcels in 20-lb. caddies or 56-lb. $\frac{1}{2}$ -chests. Carriage paid on $\frac{1}{2}$ -chests. Terms, net cash.

FINE COFFEES (Roasted)— 9d. 10d. 11d. 1/ 1/1 1/2 1/3 Mocha, 1/4 Finest Mysore, 1/5

In 28-lb., 56-lb., or 112-lb. bags; also supplied raw or ground. Terms cash, less 2½ per cent. discount.

THE NEW FRENCH COFFEE CAFE FRANÇAIS To sell at 10d., 1/, and 1/4;
in ¼-lb., ½-lb., and 1-lb. Canisters.

FULL PARTICULARS, PRICE LISTS, SAMPLES, AND ANY INFORMATION ON RECEIPT OF TRADE CARD.

EXPORT DEPARTMENT.—Every variety of Tea or Coffee in bond. Shipped f.o.b. London against banker's credit or remittance. Samples, price current, and every information on application.

UNEQUALLED CEYLON TEA IN LEADEN PACKETS.

You have yet to add to your trade considerably. This Tea is grown in the fertile Island of Ceylon. As these Packets are perfectly air-tight, the Tea can be kept in them for a considerable length of time, and yet lose none of its fragrance and aroma. Being mild and invigorating, it is especially suitable for invalids and convalescents.

Guaranteed to be absolutely pure, and full weight without the package.

Choice Ceylon Pekoe Souchong 2s. 6d.
Choice Ceylon Pekoe 3s. 0d.
Superb Small Leaf Orange Pekoe 3s. 6d.
Done up in 1-lb. and ½-lb. Lead Packets. To be had in Half Chests (50 or 40 lbs.) and Boxes (20 lbs.).

BLENDED TEAS.

These Teas are selected from the choicest growths of the earliest pickings from the best estates in India, Ceylon, and China. 1/6, 1/8, 1/10, 2/, 2/6, and 3/.

TERMS AND TASTING SAMPLES FREE ON APPLICATION.

EDWARD M. EDWARDS & SON,
WHOLESALE TEA DEALERS,

35 Jewry Street, Fenchurch Street;

Warehouse: Little George Street, Minories.

Agents Wanted.] LONDON, E.C. [Agents Wanted.

MUSTARD.

FINCH, RICKMAN & CO.'S Genuine Qualities

Are made from the finest mustard seeds only. Their compounds, as manufactured for upwards of a century, are guaranteed free from all ingredients imparting spurious heat, and are therefore equally suitable for both table and medical purposes.

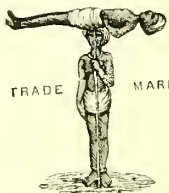
6 BROKEN WHARF, UPPER THAMES STREET.
LONDON.

THE INDIAN TEA GROWERS CO.,

VIRGINIA BUILDINGS, GLASGOW,

Have for several years supplied FOUR STANDARD QUALITIES of their PURE TEAS—

PACKED in ¼, ½, and 1lb. TINS,



Which are very suitable for, and greatly popular with, Chemists and Druggists, and Fancy Warehousemen. The Home Retail Prices, marked in plain figures on each Tin, are 2/4, 2/10, 3/2, and 3/6 per lb., or in 5 and 10 lb. Tins, 1d. per lb. less.

Terms to Agents may be had on application to A. M. STEWART, Office of The Indian Tea Growers Co., Virginian Buildings Glasgow.

CHEMISTS' TEA AGENCY.

WALKER & DALRYMPLE'S

BROKEN-LEAF TEA, 1s. 8d. per lb.

A MONEY SAVING TEA. ABSOLUTELY PURE.

The small leaf from some of the finest India and China Teas. Produces a Tea in the cup, stronger, richer, and cheaper than most whole-leaf Teas. Agents appointed, where unrepresented, throughout the United Kingdom.

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INTERMEDIATE TEA, 2s. per lb.

BEST at the PRICE EVER SOLD. Great strength and a most useful Tea where there is a large consumption. Recommended to all who wish to SAVE in their Tea. Agents appointed, where unrepresented, throughout the United Kingdom.

WALKER & DALRYMPLE'S TEAS.—

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Prospectus and Samples Free on Application.

Warehouses, 154, 155, 159 and 160 WHITECHAPEL ROAD, and

2, 4, 6, 8, 10, 11, and 12 BRADY STREET, LONDON.

P.O.O. payable at head office. Bankers, the National Provincial Bank of England.

EIGHT PRIZE MEDALS AWARDED.

GOODALL'S HOUSEHOLD SPECIALITIES.

Yorkshire Relish

THE MOST DELICIOUS SAUCE IN THE WORLD.

This cheap and excellent Sauce makes the plainest viands palatable, and the daintiest dishes more delicious. To Chops and Steaks, Fish, &c., it is uncomparable. Sold by Grocers, Oilmen, Chemists, &c., in Bottles, 6d., 1s., and 2s. each.

CAUTION.—On each Yorkshire Relish Label is a Willow Pattern Plate and name, GOODALL, BACKHOUSE & CO. No other is genuine.

Goodall's Baking Powder

THE BEST IN THE WORLD.

Makes delicious Puddings without Eggs, Pastry without Butter, and beautiful Light Bread without Yeast. In 1d. Packets; 6d., 1s., 2s., and 5s. Tins.

Goodall's Quinine Wine

The best, cheapest, and most agreeable tonic yet introduced. The best remedy known for Indigestion, Loss of Appetite, General Debility, &c. Restores delicate individuals to health and vigour. In Bottles, 1s. and 2s. each.

Goodall's Custard Powder

For making delicious Custards without Eggs, in less time and at half the price. Unequalled for the purposes intended; will give the utmost satisfaction if the instructions given are implicitly followed. Sold in Boxes 6d. and 1s. each.

Goodall's Blanc Mange Powder

Is acknowledged by all to be the most convenient and economical preparation ever introduced, as, by its use, a most Rich and Delicious Blanc-mange may be produced in a few minutes at a trifling cost, and may be had of various flavours, i.e., Raspberry, Strawberry, Lemon, Almond, and Vanilla. Sold in Packets, 6d. and 1s. each.

Goodall's Egg Powder

Acknowledged to be the only real substitute for eggs yet discovered. Its action on Cakes, Puddings, &c., &c., resembles that of the egg in every particular, enriching them in colour and flavour, rendering them most wholesome and nutritious. One penny packet will go as far as four eggs; and one sixpenny tin as far as twenty-eight. In 1d. Packets; 6d. and 1s. Tins.

SOLE MANUFACTURERS—

GOODALL, BACKHOUSE & CO.,
WHITE HORSE STREET, LEEDS.

A Monthly Price List of Druggists' Sundries, Patent Medicines, &c., can be had post free on application.

OCHO MEDALLAS DE PREMIO CONCEDIDAS.

ESPECIALIDADES de GOODALL, Para uso de familias.

Salsa de Yorkshire

LA SALSA MAS DELICIOSA QUE HAY.

Esta excelente y económica salsa hace gustosos al paladar los manjares mas ordinarios, y con su uso los platos mas delicados resultan mas deliciosos. Para chuletas, costeletas, bisteks, pescado, etc., no hay otra que puede compararse con ella. Se vende en todas las tiendas de ultramarinos, especerios, farmaceuticos, etc., en frascos a pts. 0.60, 1.25 y 2.50 cada uno.

ADVERTENCIA.—En cada etiqueta de la salsa "Yorkshire Relish" figuran un plato con el diseño llamado el sance y la razon social, GOODALL, BACKHOUSE & CO. Las demas son falsificaciones.

Polvos de hacer pan

LOS MEJORES QUE SE CONOCEN.

Con estos polvos pueden hacerse deliciosos pudines sin huevos, pasteleria sin mantea, y exquisito pan sin fermento. Se vende en paquetes a 10c., 0.60, 1.25, 2.50, y en latas a 6.25.

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El tónico mas agradable y mas económico que se ha introducido. El mejor remedio que se conoce para las malas digestiones, falta de apetito, debilidad general, etc. Devuelve la salud y el vigor a las personas debilitadas. Se vende en frascos a pts. 1.25 y 2.50 cada uno.

Polvos de Goodall para hacer confecciones de crema

Con estos polvos pueden hacerse deliciosas confecciones de crema tan exquisitas como pudieran hacerse con la adición de huevos, y se hacen por la mitad del coste y en mucho menos tiempo. Para este objeto estos polvos no tienen iguales, y darán la mas cumplida satisfaccion siempre que se conformen a las direcciones indicadas. Se venden en cajas a pts. 0.60 y 1.25 cada una.

Polvos de Goodall para hacer "Blanc mange."

Es reconocida universalmente como la preparacion mas conveniente y económica que se ha ofrecido al público, puesto que por su empleo puede producirse un riquísimo y delicioso "Blanc mange" en pocos momentos y a un coste insignificante. Hay de varias clases, a saber, polvos de fresa, frambuesa, limón, almendra, y vainilla. Se venden en paquetes a pts. 0.60, y 1.25 cada uno.

Polvos como sus- tituto de huevos

Estos polvos gozan merecidamente de la reputación de ser el único verdadero sustituto para los huevos que se ha descubierto. La acción que ejerce en la hechura de tortas, pasteles, etc., etc., es análoga a la del huevo en los detalles mas minuciosos, dotándolos de color y sabor y haciéndolos sanos y nutritivos. Un paquete de 40 céntimos equivale a cuatro huevos; y una lata de 60 céntimos equivale a veinte y ocho huevos. Se venden en paquetes a 10c. y en latas a 60c. y pt. 1.25.

ÚNICOS FABRICANTES—

GOODALL, BACKHOUSE & CO.,
WHITE HORSE STREET, LEEDS, INGLATERRA.

Se remitirá gratis al que la solicite una lista mensual de precios de artículos de droguista, medicinas de patente, etc.

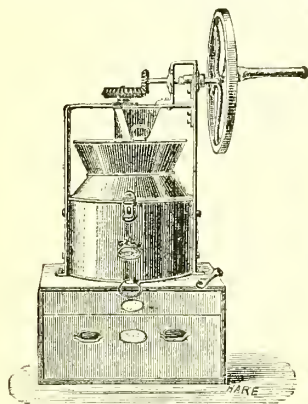
NOTICE TO CHEMISTS AND MANUFACTURERS.

DESIDERATUM MIXER

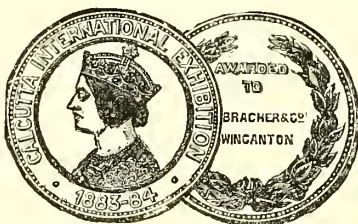
BRACHER'S PATENT

A REAL TIME, LABOUR, AND MONEY SAVER.

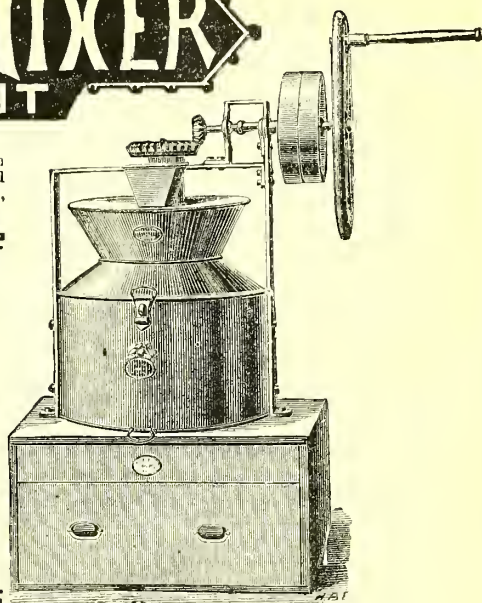
These Machines are admirably adapted for mixing all kinds of powders, heavy or light, in the shortest possible time, thereby superseding to a great extent the use of the pestle and mortar, supplying a long-felt want amongst Chemists and Druggists, Grocers, Confectioners, Drysalters, Colour Merchants, and Manufacturers.



CALCUTTA INTERNATIONAL EXHIBITION.



GOLD MEDAL.



UNSOLICITED TESTIMONIAL IN FAVOUR OF THE "DESIDERATUM" MIXER (BRACHER'S PATENT).

From CHARLES GOLDSTRAW, Agricultural Chemist, &c., 24 Oxford Street, Bilton, November 27, 1885.
 "Desideratum" Mixers some two or three years, and wanting a larger one, I took considerable trouble in ascertaining if I could find a mixer which would do the work more effectually; but I must candidly admit that, after most careful and exacting comparisons on all points, I give yours the preference; hence the present order for a 2½-cwt. size.

Messrs. P. H. BRACHER & Co.

Yours, &c.,
C. GOLDSTRAW.

Send for Illustrated Price List and full particulars, Post Free.

BRACHER & CO., WINCANTON AND YEOVIL, SOMERSET.

** All Communications to be addressed to Wincanton.

NESTLE'S MILK FOOD FOR INFANTS.

ALSO WELL ADAPTED FOR CHILDREN AND INVALIDS.

Prepared at VEVEY, SWITZERLAND.



The only Perfect Supplement and Substitute for
Mother's Milk.

Easy of Preparation—requires merely the addition
of water.

UNIVERSALLY RECOMMENDED BY PHYSICIANS.

TWENTY-TWO PRIZE MEDALS AWARDED TO THE FIRM.

FRY'S

Pure Concentrated

COCOA



TRADE MARK.

Prepared by a new and special scientific process securing extreme solubility, and developing
the finest flavour of the Cocoa.

J. S. FRY & SONS, BRISTOL, LONDON, & SYDNEY, N.S.W.

12 $\frac{1}{2}$ GALLON CASK FOR £1, CASK FREE.



School of Cookery, Crystal Palace, S.E.

January, 1883.

Mr. PETER TYRER,

SIR,—I have been using the "Borough" Ketchup, and am very pleased with it. Its flavour is excellent, both for all kinds of Savoury Dishes and Soups; and I most certainly should advise every cook and house-keeper to use it, FOR I HAVE NEVER YET MET ITS EQUAL. — MARIAN SMITHARD, Lectures on Cookery.



"We doubt whether there is any sauce or condiment cheaper, better, or more palatable than ketchup, and we are certainly not acquainted with any more economical or delicious one than that known as the 'Borough Ketchup.' With chops, steaks, cold or hot joints, or as an addition to gravies, this condiment is invaluable. In fact, the 'Borough Ketchup' may be pronounced to be the cheapest, best, and most palatable manufactured."—*Civil Service Gazette.*

"Under the title of 'Borough Ketchup,' Mr. Tyrer manufactures a sauce which possesses much piquancy of flavour, and is a clean and beautiful condiment. It is pleasant and palatable to the taste, and will, no doubt, command the favourable attention of connoisseurs."—*The Medical Press, March 14th, 1883.*

DO NOT THROW MONEY AWAY
BUT WRITE
FOR A
FREE SAMPLE OF
Tyrer's "BOROUGH" Ketchup
SENT FREE
TO ANY ADDRESS

SILVER MEDAL LONDON.

"MR. PETER TYRER, of Long Lane, S.E., supplies the School of Cookery at the International Health Exhibition with his renowned 'Borough' Ketchup. We understand that this excellent condiment is in high favour at the 'Healtheries.' Grocers who have not yet handled the ketchup will do well to try it. On application to Mr. TYRER, he will forward a free sample."—*Grocer's Gazette.*

From *The Grocer* of July 26th.

"TYRER'S 'Borough' Ketchup.—In the School of Cookery at the Exhibition we notice that the ketchup supplied to the tables bears the well-known 'Borough' brand, manufactured by Mr. TYRER, Long Lane, S.E. This ketchup is of first-rate quality, and has a large sale amongst grocers in all parts of the Kingdom. The agent for Scotland is Mr. J. C. Galloway, 115, West Nile Street, Glasgow. Mr. Tyrer forwards a free sample of this article to any member of the trade on application."

Health Exhibition, London.



"After careful examination we can discover no appreciable difference between this product and that usually sold at three and four times the price. Chemists ought not to go on paying the fancy price, unless they are satisfied that they are getting equivalent value."—*Editor "Chemist and Druggist."*

Berwick-on-Tweed, September 15th.
Mr. PETER TYRER, Borough.

DEAR SIR,—Please find cheque enclosed for one cask of ketchup, same as last.

We find our trade much increased, and profit likewise, since dealing in your article. The trade is much indebted to you for bringing out such a good ketchup, and at so low a figure.—Faithfully yours,

WM. GRAHAM CARR & SONS



12 $\frac{1}{2}$ GALLON CASK FOR £1, CASK FREE.

Sample Keg, containing THREE GALLONS, for 5/, KEG FREE.

CASH BUYERS ARE ASKED TO WRITE FOR FREE SAMPLE AND JUDGE THE ARTICLE BY COMPARISON.

SOLE
MAKER,

PETER TYRER,

70 LONG LANE BOROUGH, LONDON, S.E.

Chief Scotch Agency: West Nile Street, GLASGOW.

ROBERT GIBSON,
MEDICATED LOZENGE MANUFACTURER,
CARLTON WORKS,
ERSKINE STREET, HULME, MANCHESTER,
AND
No. 1 AUSTRALIAN AVENUE, LONDON.

ORIGINAL MAKER OF
GIBSON'S CHLORODYNE LOZENGES.
CHLORODYNE JUJUBES.
GLYCERINE PASTILLES.
DELECTABLE AND VOICE JUJUBES.
IN DECORATED TINS. TINS NOT CHARGED.

GIBSON'S ORIGINAL SUGAR WORM CAKES

Have an immense sale, both at home and abroad; will keep in any climate, and give universal satisfaction.

Put up in Tins, containing 3 dozen, 6 dozen, or 12 dozen 1d. Cakes.

GIBSON'S BOILED SUGARS

Have gained a high reputation, both at home and abroad. Are made of the best Loaf Sugar, and are equal to, if not surpassing, all others.

PACKED IN CASKS OR CASES FOR EXPORT, DELIVERED FREE ON BOARD.

Carriage paid upon six 4-lb. Bottles to any part of England.

GIBSON'S COUGH DROPS, LIME FRUIT DROPS, AND ACID DROPS,
ESPECIALLY RECOMMENDED.

THROAT HOSPITAL LOZENGES

(as per T. H. Pharmacopœia).

All Lozenges are sent out in 2-lb. and 4-lb. Bottles (bottles free), but allowed for if returned.

PROPRIETARY LOZENGES carefully prepared, stamped, and cut to any size or shape.

PRICE LISTS SENT ON APPLICATION.

HOLWAY, WRIGHT & RICH,
SOLE AGENTS UNITED STATES.

SYR. HYPOPHOS. CO. FELLOWS.

CONTAINS THE ESSENTIAL ELEMENTS to the Animal Organisation—Potash and Lime.

THE OXIDISING AGENTS—Iron and Manganese;

THE TONICS—Quinine and Strychnine;

AND THE VITALISING CONSTITUENTS—Phosphorus, combined in the form of Syrup with SLIGHT ALKALINE REACTION.

IT DIFFERS IN EFFECT FROM ALL OTHERS, being highly susceptible to oxidation during respiration, pleasant to taste, acceptable to the stomach, and harmless under prolonged use.

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ITS ACTION IS PROMPT, stimulating the appetite and the digestion. it promotes assimilation, and enters directly into the circulation with food products.

The prescribed dose produces a feeling of buoyancy, and removes depression and melancholy; hence it is of great value in the treatment of mental and nervous affections. From its exerting a double tonic effect, and influencing a healthy flow of the secretions, its use is indicated in a wide range of diseases.

NOTICE.—CAUTION.—The success of Fellows' Hypophosphites has prompted certain persons to utter substitutes. Mr. Fellows, having examined several of these, finds no two samples identical, and all differ from the veritable, in composition, in freedom from acid reaction, in susceptibility to the effects of oxygen when exposed to light or heat, in the property of retaining the strychnine in solution, and in the medicinal effects. As these cheap substitutes are frequently dispensed instead of the genuine, Mr. Fellows can only advise that his Syrup should be prescribed in the original bottles, 4/- or 7/-, where the distinguishing marks will prevent imposition.

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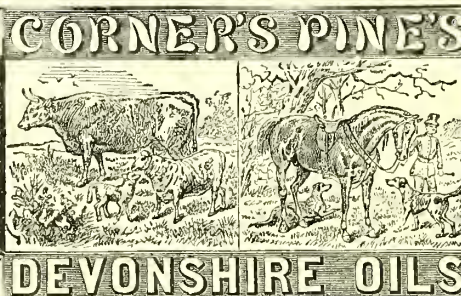
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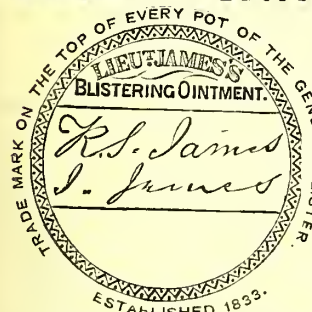
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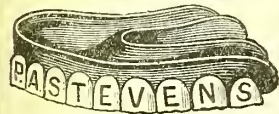
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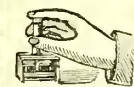
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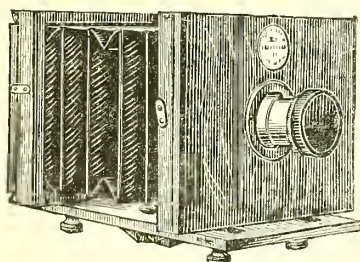
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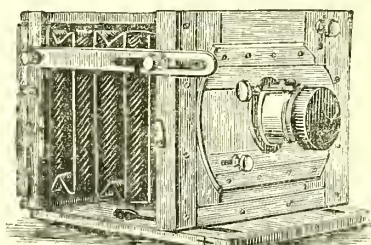
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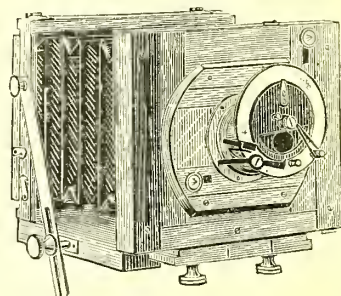
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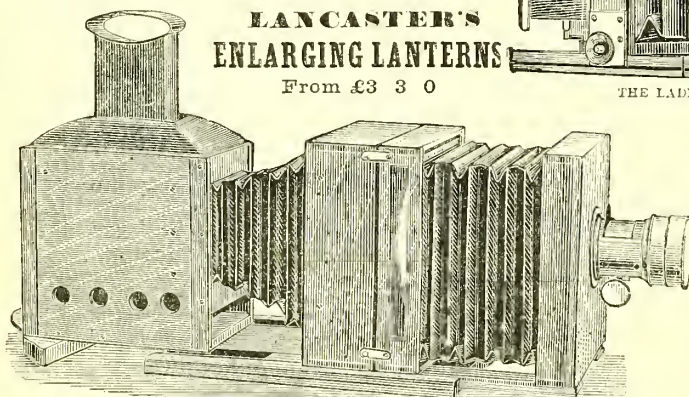
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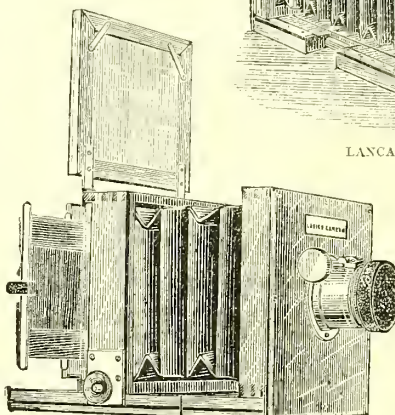
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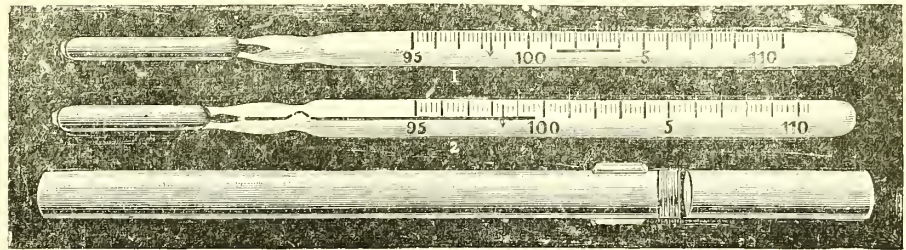
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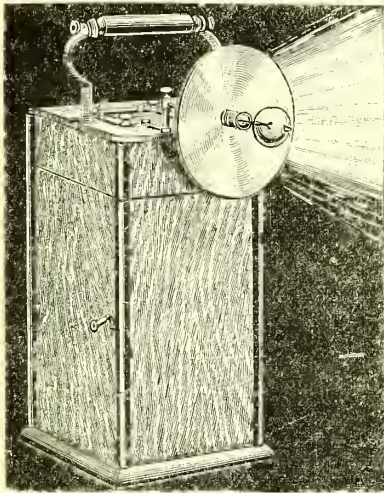
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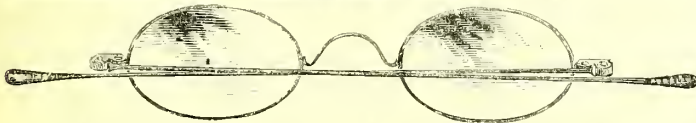
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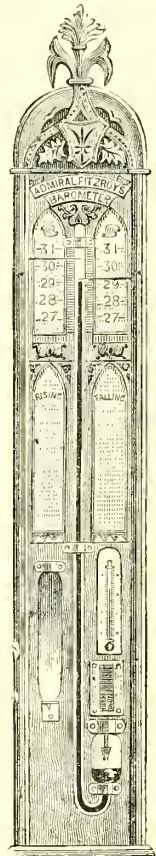
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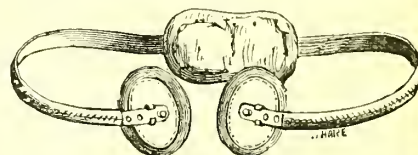
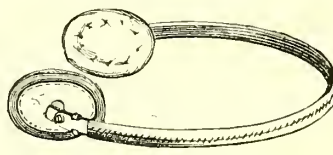
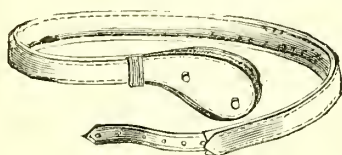
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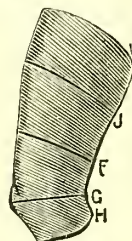
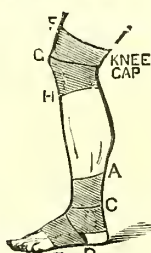
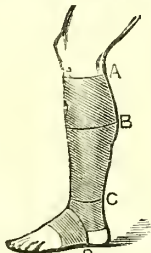
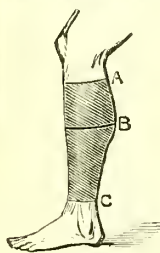
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9/6	7/6	5/6	4/7	3/4
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Circumference at A B C D E
" A C D E
" F G H
" A B C
" K F G H

Length, A to the ground.
" A to the ground.
" F to H.
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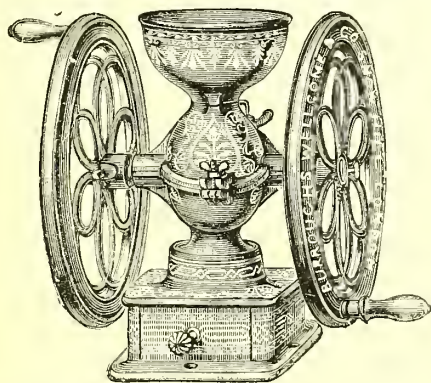
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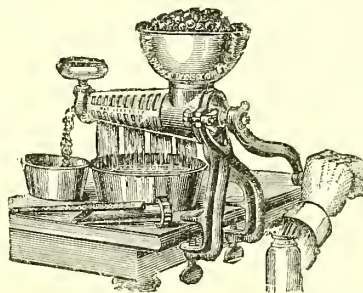
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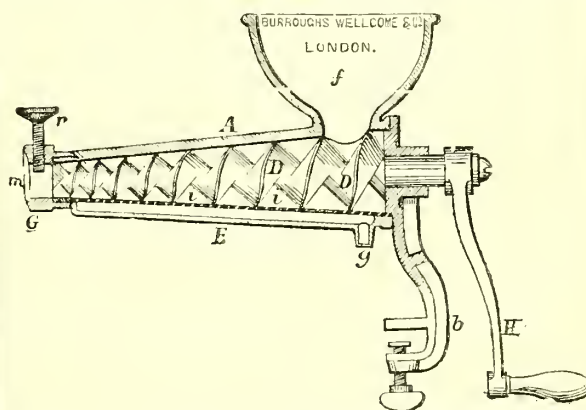
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We have the pleasure to announce, as the first fruits of our Australian enterprise, that the newly-formed Pharmaceutical Society of South Australia have contracted with us for a supply of THE CHEMIST AND DRUGGIST to all their members.

The American *Druggists' Circular* and ourselves have mutually agreed to discontinue our clubbing arrangement. American subscribers will, therefore, in future be good enough to pay either direct or through our office at Temple Court, New York, and English subscribers to the *Druggists' Circular* must remit their subscriptions direct to the office at 72 William Street, New York.

Communications are still passing between the Privy Council and the Pharmaceutical Council in reference to the proposed new by-laws which would render a curriculum legal. These communications are kept very secret, but the fact that they are still going on may be taken to suggest a reluctance on the part of the Government authorities either to reject or to approve the proposals in full. We believe this is the case, and that it is yet quite doubtful which course will be adopted.

The festive season for pharmacy is setting in with its usual severity. The Midland Counties Chemists' Association announce their fifteenth annual ball, to be held at the Birmingham Town Hall, on Thursday, January 21, in aid of the Benevolent Fund of the Association, the tickets, 5s. and 5s. 6d. each, for ladies and gentlemen respectively, to be obtained from Mr. C. Thompson, 159 Stratford Road, Birmingham; and the twentieth Chemists' Ball in London is to be held at Willis's Rooms, on Wednesday, January 27; tickets, 12s. 6d. and 17s. 6d. each, to be obtained from Mr. R. Breunridge, 17 Bloomsbury Square.

At Sheffield, our correspondent tells us, at a meeting of the Pharmaceutical Association, the new Pharmacopœia was discussed, and "a motion expressing admiration of the work

and appreciation of the successful efforts of the compilers failed to find a seconder." We hardly need a full report of the meeting after this to gather the opinion of the West Riding.

Dr. Griffiths read a paper before the Chemical Society on December 17, in which he showed that for root and leguminous crops the addition of sulphate of iron and other manures has a remarkable effect. In a series of experiments with potatoes, it was found that a plot of ground altogether undressed yielded 3 tons; a similar plot, dressed with artificial manure, yielded 6½ tons; and another similar plot, with artificial manure and sulphate of iron, yielded 8½ tons. We should think chemists would find it pay to reprint the abstract we give of Dr. Griffiths' paper and quote for the sulphate.

Out of twenty-four students who competed in our "Corner for Students" during the past month, sixteen failed to detect arsenic in a mixture of salts supplied to them, which contained 2 per cent. of arsenious acid.

We are favoured by Messrs. Newbery & Son with some correspondence which they have had with the Solicitor to the Board of Inland Revenue on the subject of the sale of pills or lozenges from vessels labelled as proprietary articles. Such labelling of the vase, it appears, renders the pills or lozenges liable to stamp duty if sold in vases or packets legally understood as such. But it appears that the Board would not regard a few pills twisted up in a piece of paper as a packet. This opens a new idea for evading the duty—a packet, box, or other enclosure being apparently an essential. The decision is not, however, authoritative as to the method which Messrs. Newbery humorously suggest of administering the medicine to the customer on the spot. If an excise officer should endeavour to entrap a chemist by purchasing some unstamped pills to be consumed on the premises, we should advise the vendor to insist on applying the stamp to the "enclosure" forthwith.

Mr. Peter MacEwan, whose resignation of the office of Secretary of the Pharmaceutical Society in Scotland was announced to the last meeting of the Pharmaceutical Council, will shortly join the editorial staff of this journal.

An American paper mentions a fraud recently brought to light in Harlem, U.S.A., which for meanness it would be difficult to surpass. It appears that, owing to the heavy demand from Canada, there has of late been a scarcity of vaccine virus in the town in question, and, taking advantage of this, unscrupulous druggists have prepared quills with croton oil instead of vaccine matter. The sore produced by croton oil is so much like that of the genuine virus that ordinary people would never know the difference, and no doubt there are a good many people who suppose that they are safe from small-pox infection when they have simply been vaccinated with an irritant.

A firm named P. & G. Pardie, of 193 Argyle Street Glasgow, have patented an invention for recesses in boot-soles for the reception of perfumes, medicinal or cooling substances, or magnetic appliances. Each recess may be fitted with a thin metal or gutta-percha case having a perforated lid. Is the notion of a scent-bottle in the boot to make matters pleasant to the kicke?

The *Times* has reviewed the British Pharmacopœia. There is no internal evidence that the reviewer has the smallest acquaintance with medicine or pharmacy, or with the purpose of the volume, beyond what he could pick up from a hasty glance through the preface; but he feels himself quite competent to conclude, in Johnsonian language: "We think it will be the decision of the best judges that the discretion vested in the committee has been wisely exercised, and that the tendency of the new Pharmacopœia will be at once to elevate and to simplify the practical work of pharmacy."

Foreign and Colonial.

CINCHONA CULTIVATION has been commenced in Guatemala. The plantations are at an altitude of 4,000 to 5,000 feet.

THE CINCHONA TREES of all ages now under cultivation in the Wynaad district (S.W. India) number 5,000,000.

PATENT MEDICINES IN ROUMANIA.—By Ministerial decree the importation into Roumania of patent medicines and proprietary articles, with the exception of some specially declared exempt, has been prohibited from January 15, 1886.

NEGOTIATIONS for the purchase of the Misojeff Naphtha Works, in the Caspian district, by a German-English company, have fallen through. The works have now passed into the hands of a Russian syndicate.

THE drug business of Vincenz Zanni, in Constantinople, hitherto carried on by Dr. Joseph Zanni and Mr. Edward Zanni, sons of the late proprietor, has now passed into the exclusive possession of Mr. Edward Zanni.

NEW FIRMS.—Paul Pincus & Sachs, drugs, dyestuffs, and chemicals, 51 Wasserthor, Berlin, S. Anfray, Mouton & Cie, drugs, 20 rue des Francs-Bourgeois, Paris. Company formed for the term of nine years, capital 495,000f., of which 165,000f. is "en commandite."

THE PRODUCTION OF INDIGO will be represented at the forthcoming Indian and Colonial Exhibition. A model of an indigo factory will show every process, from the carting in of the plant to the packing of manufactured indigo for export.

A SULPHURIC ACID COMBINATION.—A combination, having for its object the regulation of the price of sulphuric acid, has been formed by some German manufacturers at the instance of the Chemische Fabrik Griesheim. They have commenced by increasing their price by 11 per cent.

THE LATE PROFESSOR LANDERER.—It is proposed to erect a monument in Athens in commemoration of the late Professor Landerer, whose death we recorded some time ago, and who was an occasional contributor to this journal. A portrait of the doctor will also be placed in the University building.

MANCINI'S SOAP AND STEARINE CANDLE WORKS, in Rome, the only manufactory of the kind in Italy, now consumes 2 tons of stearine per day, yielding 35,000 to 40,000 candles, the daily production of common soap amounting to 25 to 30 cwt. The machines are of German origin, and the material is also said to be bought in Germany.

A NEW GERMAN-TURKISH CUSTOMS TREATY has just been completed by which the duties on many articles imported into the Turkish dominions from Germany have been lowered, and on others increased. Among the latter are drugs from 8 to 10 per cent., syrup from 8 to 16 per cent., spirit from 8 to 20 per cent., glassware from 8 to 12 per cent. *ad valorem*.

OYSTERS AS VEHICLES FOR MEDICINES.—A French oyster merchant now advertises as a medicine tar oysters and ferruginous oysters, the latter specially suitable for anemic persons. The oysters are said to have been analysed by distinguished scientists, who strongly recommend them. The combinations do not recommend themselves for imitation.

A TEN THOUSAND DOLLAR FINE.—A despatch from Montreal states that the Government has imposed a fine of \$10,000 on J. C. Ayer & Co., of Lowell, Mass., a large consignment of whose patent medicines was recently seized by the Customs authorities there on a charge of under-valuation. Messrs. Ayer were in the habit of sending the ingredients separate for the consignees to mix them themselves, and entering the same at the Customs as raw material, but the Government insisted on the full duty for the manufactured article.

ANTOINE'S INK FACTORY.—From an account of the celebrated ink factory of L. Antoine fils, of Paris (who advertises his products in this journal), in the *Union*, it appears that the firm employ no less than eighty-five workmen, besides about twenty clerks and several travellers. They have besides branch businesses and agencies in England, Germany, Spain, China, &c.

GERMAN SPIRIT EXPORTS TO SPAIN seem to be on the increase, a German firm having undertaken the monthly delivery of two cargoes of Russian spirit (refined in Germany) during the winter months. Russian firms are also preparing to enter the promising field of Spanish trade, the recently concluded commercial treaty having placed Russian spirit on the "most-favoured-nation" footing.

PHARMACISTS AND HOSIERS.—Some pharmaceutical journals here and elsewhere have published paragraphs stating that the Paris pharmacists have prosecuted some hosiery for selling a certain hygienic flannel recommended against rheumatism. The Pharmaceutical Association of the Seine has not done anything so absurd. The persons prosecuted sold with their flannel a certain fine essence with which to impregnate it. It was in respect of this essence they were prosecuted. The courts, however, held that the product was hygienic and not a purely pharmaceutical one.

A TEMPTING OPENING.—A Madagascar correspondent writes:—"In Antananarivo is no chemist's shop. I should very much like to see some Englishman establish one; it would be a paying establishment. The Jesuit Mission, with their usual foresight, used to have a fine supply of all drugs, but they gave them away more or less, and now we have nothing. Some of the natives sell a few odds and ends, but they have an interesting way of sending them out, such, for instance, as 25 drops of laudanum in an empty beer-bottle, with a wisp of paper for a cork."

DISPENSING ACCIDENT IN GERMANY.—A chemist's assistant was tried at the Hamburg Criminal Court on December 30 last on the charge of having caused the death of a child, aged 6, by inadvertently substituting muriate of morphia for muriate of quinine in dispensing a prescription. The child, a little girl in delicate health, was suffering from fever for which a doctor ordered four powders, each containing muriate of quinine 0.25 gr., and sugar 0.5 gr., the receipt being copied on the box in which the powders were placed. Between 8 and 9 A.M. the child took two powders, and was soon after attacked by violent vomiting, followed by convulsions, ending in death, under symptoms of poisoning, such as contraction of the pupils of the eyes, nineteen hours after administration of the powders. Upon analysis the remaining two powders were found to contain each 0.25 gr. muriate of morphine, but a post-mortem examination failed to prove the presence of any traces of that substance in the body, though the brain showed signs of its action. Medical witnesses were called on both sides. In answer to questions whether a child having taken 0.5 gr. (7½ grains) morphine could survive for nineteen hours, and whether it would be possible to completely expel morphine from the stomach by means of vomiting and purging, the witnesses for the prosecution maintained that, although, as a rule, in cases of poisoning by morphine the drug would be found in the intestines, yet the absence of morphine would not preclude the possibility of death by morphine poisoning, and affirmed that the exceptionally long space of nineteen hours which intervened between the administration of the powders and death might be accounted for by the action of the poison having been weakened by the vomiting, by which part of the morphine would have been removed. Against this evidence was placed that of other physicians, who stated, one, that the child could not possibly have survived a dose of 0.5 gr. morphine during nineteen hours, and another that, although he was not prepared to say that morphine poisoning was *not* the case of death, yet traces of the drug should have been found in the body. The accused was ultimately found guilty and sentenced to four months' imprisonment.

CORNER FOR STUDENTS.

CONDUCTED BY RICHARD J. MOSS, F.C.S.

QUALITATIVE ANALYSIS.

A MIXTURE of salts will be distributed to students for the next exercise in qualitative analysis. The mixture is to be submitted to a thorough systematic examination, such as is designed not only to detect its constituents, but also to demonstrate the absence of other substances. The reports sent in by students should give a brief account of the analysis, with a list of the metals and acid radicles detected.

Applications from students desiring to compete should be sent in not later than January 20. Portions of the mixture of salts will be sent to applicants on the 25th.

Students' reports will be received up to February 15.

REPORTS.

The subject of the last exercise was a mixture consisting of:—

	Parts
Zinc sulphate	40
Magnesium carbonate	40
Calcium carbonate	8
Potassium chromate	10
Arsenious anhydride	2

Separating the metals and acid radicles, it will be found that the composition of this mixture was as follows:—

Zn	9.06
Mg	11.43
Ca	3.20
K	4.01
As ₂ O ₃	2.00
CrO ₃	5.99
SO ₄	13.38
CO ₃	33.37
H ₂ O	17.56

100.00

Judging from the reports sent in by our correspondents, their chief difficulty was in the detection of arsenic, as sixteen students reported this element absent. In the case of calcium there were ten failures, magnesium, 5; zinc, 3; and potassium, 2. The acid radicles were detected in every case. In examining the papers it was observed that three students detected benzoic acid; it is remarkable that these three students reside in the same town. Two students hailing from another town failed to detect arsenic calcium and magnesium, and they report antimony, aluminium, and sodium as present. It is clear that these analyses were not conducted independently, and, considering how inaccurate they are, it would seem that neither student could have derived much benefit from co-operation with the other.

There is one explanation of the numerous failures to detect arsenic—sulphuretted hydrogen was not passed through the acid solution for a sufficient time. Owing to the presence of a chromate, the first effect produced on passing sulphuretted hydrogen through the acid solution was to deoxidise the chromium compound, and transform it into chromous chloride. This change took place slowly, and was accompanied by a change in the colour of the liquid from yellow to green, and the appearance of a slight precipitate of sulphur. On continuing to pass the sulphuretted hydrogen, a yellow precipitate formed, but only after the lapse of some time. Supposing the liquid to have been cold, these changes would have taken place very slowly, but, at a temperature of about 70° C., and with the gas passing at the rate of about two bubbles per second, the series of reactions occupied about five minutes. Those who were unsuccessful in their attempts to

precipitate arsenic will naturally ask how they were to know when a sufficient quantity of the gas had been used. The answer is that the sulphuretted hydrogen should be passed through the warm acid solution until it is completely saturated. It is easy to find out whether it is saturated or not by thoroughly shaking the solution in a test-tube. If the solution smells strongly of sulphuretted hydrogen after this operation, it is saturated; if not, it must be again submitted to the action of the gas. To save time and trouble it is generally advisable to operate upon a small portion of the acid solution at first, for it may turn out that sulphuretted hydrogen produces no effect, or only causes a separation of sulphur, in which case it will be unnecessary to repeat the treatment with the rest of the solution. The necessity for these precautions cannot be realised without an actual trial, and we strongly recommend those students who are anxious to avoid a repetition of the error to prepare a mixture of the composition given above, and to repeat the analysis of it with the aid of the hints that we have given.

PRIZES.

The First Prize for the best analysis has been awarded to Mr. A. A. BARRETT, 46 New Street, Birmingham.

The Second Prize has been awarded to Mr. WESTON POOLE, 50 High Street, Newcastle, Staffordshire.

Marks Awarded for Analyses.

A. A. Barrett (first prize) .. 92	"Nemo" 65
W. Poole (second prize) .. 90	C. B. Gilson 60
J. B. 83	J. Austin 60
W. E. Goff 85	J. R. M. S. 55
G. J. Walklett 85	T. S. Adair 50
F. Calder 82	T. S. Kay 50
S. Gibbs 82	"Atmolysis" 50
"Lactuea" 78	A. Burns 50
"Spes" (Liverpool!) 75	B. 45
"Dulley" 75	"Nil desperandum" 40
"Spes" 72	A. Latehmore 30
"Campanula" 70	Lewis Ough 30

TO CORRESPONDENTS.

Prizes.—The students to whom prizes are awarded are requested to write at once to the Publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as second prize.

* All communications should include the names and addresses of the writers.

A. A. BARRETT.—The mere consideration of solubility will not enable you to determine the order in which metals and acid radicles are combined, and in the case of mixtures which may have any conceivable arrangement of constituents it would be very difficult to find out how they are combined. It is better to content yourself with giving a list of the constituents detected, and to avoid mere conjecture.

SPES.—The sublimate which you obtained on heating the powder in a dry tube consisted of arsenious anhydride, and had you examined it with a lens you might have observed that the crystals were octahedral, and quite different from those of benzoic acid.

NEMO.—A small quantity of calcium may easily be overlooked, unless the solution is warmed after the addition of ammonium carbonate, and some time allowed for the formation of the precipitate.

C. B. GILSON, J. AUSTIN, J. R. M. S.—See remarks to "Nemo."

ATMOLYSIS.—Magnesium was the most abundant metallic constituent; unless you arrived at a conclusion far too hastily, it is hard to understand how you could have failed to precipitate it as ammonio-phosphato.

A. BURNS.—You will no doubt succeed in detecting ammonia in minute quantities in most salts if you carry out the test with sufficient care.

NIL DESPERANDUM. Zinc was easily detected in this case. You ought to make a careful experimental study of the reactions of the metal.

The Pharmaceutical Council.

THE meeting of the Pharmaceutical Council on January 6 was marked by a rather thin attendance, Messrs. Borland, Bottle, Greenish, Richardson, Squire, and Williams being absent. The President (Mr. M. Carteighe) was in the chair.

THE EXAMINERS.

The secretary reported that a letter had been received from the Privy Council approving the list of examiners which had been submitted to them.

THE SECRETARY IN SCOTLAND.

The PRESIDENT read a letter from Mr. Peter MacEwan, resigning his position as secretary to the Society in Scotland. He then moved—

That the Council regrets to receive from Mr. Peter MacEwan notice of his retirement from his official position in the Society, and desires to record its appreciation of the services that he has rendered to the Society and to pharmacy during the time he has been the Society's officer in Scotland. The Council hopes that his future career may be a successful one.

In so doing he begged to express on his own part and that of the Vice-President their regret at losing this very efficient officer. Having had occasion several times to go to Scotland officially, they had been struck, as had also their colleagues in the North, with the activity, intelligence, and increased scope of the work which Mr. MacEwan showed every time they attended the meetings of the Board of Examiners in Scotland. Although they regretted to lose his services, they were glad to note from the papers he had published, and from the position they understood he was about to assume, that while he had been doing good service to the Society he had been able to make valuable use of his position, so that he left the service of the Society not only with the good feelings of those who appointed him, but with a wider store of personal knowledge, and was thus better fitted for the battle of life.

The VICE-PRESIDENT and Mr. YOUNG also spoke in high terms of Mr. MacEwan's services and abilities.

After consideration in Committee it was resolved to offer the vacant position to Mr. John Rutherford Hill, of Edinburgh, on conditions to be agreed upon by the President, Vice-President, Mr. Borland, and Mr. Young.

THE LIBRARY AND MUSEUM.

A number of gifts to the library were acknowledged. The following specimens had lately been presented to the museum:—Specimen of spurious opium, from Messrs. J. A. Wink & Co.; pods of *Strophanthus kombé*, from near Lake Nyassa, East Africa, from Mr. H. B. Moir and the Rev. H. Waller; specimen of sodium fulminate, from Mr. W. H. Ince. To the herbarium: Thirty-six specimens of rare British plants, from Mr. F. J. Hanbury; specimen of *Eucalyptus globulus* in flower, from San Remo, from Mr. F. R. Squire, of San Remo.

EDUCATIONAL GRANT.

The Library and Museum Committee had considered an application from the Sheffield Pharmaceutical and Chemical Society for a grant, to be expended in books and in improving the laboratory, and recommended that a grant of 25*l.* be made for the purchase of the books, and that the Society be urged to endeavour to make arrangements with Firth College, in order that the students might be enabled to attend laboratory instruction in that institution.

This was adopted.

TRADE-MARKS.

The same Committee had considered a memorial from the Dover Chemists' Association, relating to trade-marks, and did not think it desirable for the Society to take any steps in the matter.

On this subject Mr. SYMES mentioned the action of the Trade Association in reference to trade-marks, and regretted that that Association had not been better supported in this work. He hoped the Council would authorise the publication of their lists in the Society's journal.

EDUCATIONAL SUGGESTIONS.

The Committee had considered the question of prize awards in chemistry, botany, and materia medica to students in provincial schools of pharmacy. They proposed to further consider this matter at their next meeting. The further consideration of the scheme for a research laboratory had been postponed. They recommended a grant of 50*l.* to Professor Dunstan towards his expenses in connection with the use of the Octagon Laboratory.

This was agreed to.

LEGAL.

It was reported that Charles Durant, 27 Bargate, Boston, had paid into Court the amount of penalty and costs for which he had been sued. Several other prosecutions were ordered.

BY-LAWS.

A communication in reference to the by-laws had been received from the Privy Council, and had been replied to.

EXAMINATIONS.

The report of the December examinations in London showed that out of eleven candidates for the Major five had passed, and that out of 127 for the Minor forty-even had passed.

Pharmaceutical Society of Ireland.

MONTHLY meeting of the Council on January 11, the President, Mr. J. E. Brunker, M.A., in the chair. The Vice-President (Mr. Draper), Professor Tichborne, Dr. Collins, and Messrs. Beggs, Hayes, Grindley, Allen, and Hodgson were also present.

A letter was read from Mr. Charles Evans, thanking the Council for re-electing him Examiner in Pharmacy.

The PRESIDENT remarked that a letter had appeared in THE CHEMIST AND DRUGGIST from a gentleman who had been examined by Mr. Evans, which was the best vindication of the efficiency of the examination that could be accorded.

Professor TICHBORNE: And I was glad to observe that that letter was not anonymous, but was signed with the gentleman's name.

A letter was read from Dr. Montgomery, enclosing his subscription as a member of the Society for the current year and conveying to the President and members of the Council his very sincere thanks for the kind feelings expressed towards him in their resolution of December 17.

PRESIDENT: The next business is to elect a member of the Council in the room of Mr. William Harrington, who died last month. It being desirable, if possible, to have Cork represented, I wrote to Mr. Lyster, of that city, on the subject, and received a reply stating that he could not promise to attend the Council frequently, if elected. Dr. Montgomery is quite willing to act on the Council again.

Mr. Hayes moved and Mr. Grindley seconded the election of Dr. Montgomery, which was carried unanimously.

On the motion of Professor Tichborne, seconded by the Vice-President, the Registrar was directed to write to the representatives of the late Mr. William Harrington expressing the regret of the Council at the death of that gentleman.

A letter was received from Dr. Tweedy, one of the examiners, asking the opinion of the Council as to whether he ought to pass several gentlemen who were deficient in spelling, although they had answered up to the mark in the other prescribed subjects.

The Registrar was directed to convey to Dr. Tweedy the unanimous opinion of the Council that the gentlemen in question could not be allowed the examination.

Some financial and other business having been disposed of the Council adjourned.

There were six candidates for the licence at the quarterly examination.

The second evening meeting of the present session was held on Wednesday evening, January 6, the President, Mr. J. E. Brunker, M.A., in the chair.

The following communications were read and discussed :—
Mr. E. A. Werner, "On the New Pharmacopœia Test for the Purity of Ether."

Mr. H. C. Draper, "On a Method of Measuring Microscopic Objects."

The President, "On the Syrup of Phosphate of Iron of the Pharmacopœia."

Mr. A. L. Doran, "On the Weights and Measures of the Pharmacopœia."

Dr. Walter G. Smith exhibited and explained the chemical constitution and physiological action of some new drugs, including thallin and urethane; and Mr. W. N. Allen, a measure graduated to show the grain measures of the new Pharmacopœia.

Metropolitan Reports.

SUICIDE OF A PHYSICIAN.—On Christmas Day Dr. Henry Wotton, M.D., of 15 Notting Hill Terrace, called at the shop of Mr. W. A. Sugden, chemist, Bedford Terrace, Silver Street, to whom he was known as a medical man, and asked for $\frac{1}{2}$ oz. of prussic acid. When the quantity was mentioned, Mr. Sugden looked up at Dr. Wotton, who remarked that he required it to be put into a prescription to be used by a lady for an outward application. Mr. Sugden supplied the prussic acid, and Dr. Wotton appears to have taken it and died in consequence. At an inquest held on December 29 it was shown that the mind of deceased had more than once been affected by over-study, and the jury returned a verdict of "Suicide while of unsound mind."

Provincial Reports.

BIRMINGHAM.

Notes written for THE CHEMIST AND DRUGGIST.

ON December 21, an extraordinary meeting of the shareholders of the Birmingham Household Supply Association was held for the purpose of considering "the present condition and future prospects of the business, and certain proposals for its development." Mr. William Marmaduke Walkington has succeeded Mr. W. B. Shaw as manager of the dispensing and drug department at the above stores. Mr. Walkington's name is printed on the labels used.

ECONOMY WITH A VENGEANCE.—One of Seabury & Johnson's "strengthening" porous plasters was sold nearly three months ago, by a chemist not far distant from the centre of the town to a lady customer, who recently informed him that after wearing the plaster for over two months, and finding it still retained such "hold-fast" properties when taken off, she had been able to successfully "strengthen" a cracked dish with it.

On Monday evening, December 14, Mr. Fred Stamps, late in business as a "pharmaceutical chemist" at West Bromwich, gave his seventh annual organ recital at the Mayers Green Chapel, the profits from which were to be added to a fund for supplying destitute and poor children with a free breakfast the following Christmas-day morning.

An inquest was held on December 14, upon the body of Florence White, aged 17 days. The parents stated that the child was suffering from cold, and a neighbour advised a mixture of paregoric and syrup of violets, which they obtained from a chemist in Sherlock Street, whom they told it was for a child a fortnight old, and he advised a dose of 10 to 15 drops twice a day. After taking the third dose the child had convulsions and died. Mr. Jones, surgeon, who was called in, said "that anything in the shape of opium

was bad for a child of that age. It might have brought on convulsions; but the dose in this case was very minute. Paregoric was sadly too much used for children." A verdict of "Death from natural causes" was returned.

On Tuesday evening, December 29, Messrs. Dale & Plant, drysalters and wholesale druggists, entertained their employés, about 50 in number, at dinner, served in their new Art Gallery which is about to be opened at 80 Smallbrook Street, adjoining their present premises. The evening was spent in a pleasant and interesting manner.

AN UNQUALIFIED PRACTITIONER.—On the 5th instant Mr. Hawkes (coroner) held an inquest on the body of Ellen Jones, one year and nine months old. The mother of the deceased said that her child was taken ill about three weeks ago. She doctored the infant herself for a week, when she sought the advice of Mr. Westley. He said he could not attend unless his fee was prepaid. Witness managed to get some money, and Mr. Westley attended until the following Thursday, when he refused to attend to the case any longer unless his fee was paid. He did not come again, and deceased seemed to progress favourably till Saturday, when it died. Mr. Westley was again sent for, but replied that the case was entirely out of his hands. Philip Carpenter Westley, who described himself as a medical botanist, of Cattell Road, was then sworn, but before making any statement Mr. Hawkes warned him as to what he might say, because he might make himself liable for holding himself out as a doctor without having a medical certificate. Witness read some abstracts from his diary. He said he went to see deceased three times one day, but the mother was out. Mr. Hawkes: Do you suppose that you can hold yourself out as a medical practitioner and receive fees? If so you had better learn a little law. Mr. Kingsland, surgeon, said that death was due to pleuro-pneumonia, resulting from serous matter. He could not tell how long it had taken for that fluid to generate, but if a proper medical man had attended, he would have been able to diagnose and treat for such a case. Mr. Hawkes said if Mr. Westley had not washed his hands of the affair at the time he did, he (Mr. Hawkes) would have asked the jury to say that death was caused by the gross ignorance on the part of the medical practitioner. The jury returned a verdict of "Death from natural causes," adding that there had been neglect as regards medical advice.

MIDLAND COUNTIES CHEMISTS' ASSOCIATION.

At the December meeting a paper entitled "The Hygiene of the Mouth and Teeth" was read by Mr. W. Elliott, L.D.S., F.C.S.

The teeth for the purpose of treatment were considered to have five distinct parts, each of which was minutely described—the enamel, dentine, cementum, pulp, and pericemental membrane.

The process of calcification, as also the action of saliva on the teeth, both in health and disease, inflammation and its causes, remedies for the relief of pain, and deposition of tartar, were each alluded to.

The subject of caries was dwelt upon at length, and the several theories with regard to its formation noticed. The causes were arranged under the heads of predisposing and exciting, amongst the latter the use of tooth-picks, improper dentifrices, liquid and solid, and abuse of popular drugs for cleansing the teeth and mouth.

With regard to this portion of the paper the author did not object to the use of the generally accepted antiseptic agents, such as earbolic acid and benzoic acid, but he did not advise salicylic acid and thymol for constant use.

Camphor was said to cause brittleness in the teeth. Charcoal was strongly objected to, whether in coarse or fine powder, as also was pumice and armenian bole, for similar reasons. Carbonate of sodium and borax were considered desirable additions to tooth powders and washes, as also oil of winter-green; but the use of alum and astringents generally were not looked upon with favour. The judicious use of a very weak solution of mercuric chloride as a wash for purifying the mouth and preserving the teeth by preventing the development of micro-organisms has been shown by Professor Milles, of Berlin, to be effectual for this purpose.

There was a good attendance of members, many of whom entered into the discussion which followed.

BELFAST.

THE CORONER AND THE PHARMACY ACT.—Dr. Dill, the Belfast coroner, who on a previous occasion had to be taught some of the rudiments of the law respecting the sale of poisons, has again distinguished himself by an inaccurate exposition of the law. An inquest was held last month on the body of a man who had committed suicide by taking oxalic acid. There was no evidence as to where the poison had been procured. The Coroner quite properly instructed the police to call on all the druggists and grocer-druggists in the neighbourhood in order to find out, but he put them on a wrong scent by telling them and the jury that it was one of the requirements of the law that the purchaser should sign his name when oxalic acid is obtained. His apparent assumption that grocers are legally entitled to sell poisons is equally misleading and more mischievous, but this notion is perhaps excusable in view of the apathy shown by the legally-appointed guardians of the Irish Pharmacy Act.

HULL.

PROSECUTION BY THE PHARMACEUTICAL SOCIETY.—At the County Court, on December 6, before Judge Bedwell, the Pharmaceutical Society sued a Mr. Bush for infringement of the Pharmacy Act. Mr. Granger, barrister (instructed by Klux & Co., of London), appeared for plaintiff, Mr. Mills for defendant, and Mr. Whitehead watched the case on behalf of Mr. George S. Highmoor. This was an action to recover 10*l.* penalty for selling some laudanum contrary to section 15 of the Pharmaceutical Society's Act. It appeared from the evidence that the defendant, who is not a certificated chemist, purchased the business of Mr. Highmoor, 46 Waterworks Street, and conducted the business under the old name. On November 14 the laudanum was sold in defendant's shop to a representative of the Society's solicitors. During the hearing of the case it was proved that the defendant had purchased the business out and out, and that Mr. Highmoor was simply the tenant of the premises. Subsequently, the defendant having admitted the offence, his Honour gave a verdict for the full amount with costs.

SCOTLAND.

(Special Correspondence.)

The class-rooms of Gordon's College, Aberdeen, are to be illuminated with the electric light.

Mr. W. S. Adamson has recently delivered a lecture on the new Pharmacopœia to the Aberdeen Chemists' Assistants' and Apprentices' Association.

By an arrangement with the St. Andrew's University authorities the science students of the Dundee University College may proceed to the science degrees of the former without any condition of residence. This will be good for the University and will be welcomed by the students. The arrangement is considered a most important and judicious one in the direction of university reform.

Thomas David Kemsley, an apprentice with Mr. Alexander Whin, of Montrose, came before the Montrose Police Court on December 11, charged with having taken 8*s.* in silver, 21*s.* in coppers, and goods to the value of 6*s.* 6*d.* from his master's shop, and absconded, leaving a note in the till as follows:—"I have taken more than my wages; take it out of the bank of my money." The lad, against whose previous character nothing could be said, had some 3*l.* in the bank. Bailie Scott said this was a very peculiar case. Theft, under any circumstances, was a most serious crime. He would pass upon him a sentence of twenty-four hours' imprisonment, just to mark his disapproval of his conduct, and he hoped he would take warning for the future.—On the morning of January 5 Kemsley was found dead in bed by his mother. It was afterwards discovered that deceased had poisoned himself with hydrocyanic acid. He was dismissed by his employer a month ago, and since then has been in a very desponding state of mind.

Several new mineral springs have been discovered near Strathpeffer. How convenient for the natives that these should have been tapped just when the "Branch Pharmacy from London" has been closed for the winter!

On Christmas morning a young man, named William Armstrong Marks, who managed the open shop of Dr. Haggart, Aberfeldy, died suddenly. For a short time previous to his death Marks had suffered from sleeplessness, and it was at first supposed that an overdose of a narcotic had caused his death, but a post-mortem examination revealed the fact that he had been suffering from latent pneumonia and pleurisy, which were the immediate cause of death. The deceased, who was twenty-three years of age, belonged to Edinburgh, and had only been six weeks in Dr. Haggart's employment.

Amongst the tradesmen authorised by the Lord Chamberlain to use the royal arms are Duncan, Flockhart & Co., Edinburgh; Frazer & Green, Glasgow; and Davidson & Kay, Aberdeen; all chemists and druggists to the Queen.

EDINBURGH.

EDINBURGH CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIATION.

The fifth meeting of this session was held in the usual place on Wednesday night, December 16, Mr. Rutherford Hill, President, in the chair. Mr. C. F. Henry read a paper on the "Pharmacy of the new Pharmacopœia." The paper was largely taken up by a protest against the exclusion of practical pharmacists from the compilation of the national Pharmacopœia. The writer's comments on the various preparations were short and to the point, and he illustrated what he had to say with a goodly array of specimens. The usual discussion followed. A meeting was held on January 6, and was devoted to "Notes and Queries," for which arrangements had been made by Mr. W. Scott Turnbull, and it proved to be a most profitable and successful venture. The first paper read was on "Bismuthi Citras, &c.," by Mr. Peter MacEwan. Mr. A. M. Macdonald followed with a note on some "Dispensing Difficulties." Amongst those difficulties was a prescription which gave an unexpected and unknown precipitate. The mixture was composed of the following ingredients:—

Tr. opii ammoniat.	..	..	..	..	3 <i>ss.</i>
Spt. æther. nitrosi	..	..	..	..	3 <i>ss.</i>
Vin. ipecac.	..	..	..	..	3 <i>vi.</i>
Syrupi	..	..	..	..	3 <i>vi.</i>
Aquam, ad	..	..	..	..	3 <i>ij.</i>

Mr. Macdonald gave details of experiments made in search of various substances, such as emetine, but he had failed to get anything satisfactory from them. As a result of a study of the action of tinct. opii ammoniat. with water, he was led to search for polychroite (the colouring-matter of saffron), and this he ultimately found to be the main constituent of the precipitate, from which he obtained it in the pure state, and found that it gave a blue colour with sulphuric acid, and a green to yellow with nitric acid. Mr. Macdonald further showed that if tinct. opii ammoniat. made without saffron be used in the prescription no precipitate is formed. The next paper was by the President (Mr. Hill); it will be found printed in another page. Mr. Alexander Sutherland, a young member, followed with a note on "Bitter Almonds." This was a short and well-written account of all that is known of almonds and their constituents, and was particularly interesting from the fact that the writer illustrated it with a number of products—such as amygdalin, benzyl hydride, &c.—made by himself. Mr. Turnbull then read notes on a "Deposit in Ethereal Tincture of Lobelia," and "Phosphorescence," both of which were of an interesting and instructive nature.

The Chairman moved a vote of thanks to the various contributors, which was seconded by Mr. Thomas Stephenson who briefly referred to the more important points in the papers read. Messrs. Boa, Duncan, Govan, and others continued the discussion, which was also joined in by the reader of the papers. Thereafter several queries were submitted amongst which this one gave rise to an animated and amusing discussion: "Can a chemist legally sell plain brandy when ordered in prescription by a medical practitioner?" It was ultimately decided to ascertain what the Inland Revenue authorities had to say about the matter, and the secretary was instructed accordingly.

Dick's Veterinary College is to be considerably enlarged by the erection of a new building immediately to the west of the present premises.

Jane Barbour, or Chalmers, intent on a brief and merry existence, resorted to the whisky bottle, and, becoming tired of the process, tried the effect of laudanum. Further experiment was continued in the Royal Infirmary, and, later, in the police court, where the magistrate prescribed three days' quiet.

A GOOD DIVIDEND.—The shareholders of the Dalmeny Oil Company have lately received a dividend of 25 per cent. This takes up half of the year's profits, the other half going for new retorts.

"At 7 St. Bernard's Crescent, Edinburgh, on December 18, Agnes Christie, relict of John Mackay, chemist."

This simple announcement will be read with sorrow by many, even by those to whom John Mackay was but a name, though a wide-reaching influence.

The funeral of the late Sir George Harrison, M.P., whose death creates the first vacancy in the new Parliament, was deservedly a public one. It took place on Saturday, December 26. Pharmacy was represented through the North British branch of the Pharmaceutical Society. It was curious and interesting to notice the position of the pharmaceutical contingent in the procession. Before it were limbs of the law—"S.S.C.'s," "W.S.'s," and advocates; behind, the Royal Medical Society and the Colleges of Surgeons and Physicians. Pharmacy was ranked as an "integral, though subordinate, part of the medical profession."

The Edinburgh Chemists' Ball was held in the Freemasons' Hall, George Street, on the 14th inst. A great success was anticipated, as all the tickets were taken up some time ago.

The question of "cutting" prices is now agitating the Edinburgh trade to the core. A meeting was recently held at which it was unanimously agreed to keep to the old dispensing charges; but there was a little difference of opinion about "trade" prices for common articles of retail, and still more difference about prices of patents. Ultimately it was agreed, by a narrow majority, to nail the old colours to the mast, and to trust a discriminating and unselfish public to search for "quality and skilful service." Some philistines said that quality is out of count in the patents question, and threatened to take what price they could get.

The resolution to keep up the dispensing charges is universally approved. The extremists are willing to give in regarding ordinary drugs, but they insist that patents must be cut to the bone. Reduced price-lists are, therefore, keeping the printing-press agoing. Another meeting of the trade was held on January 12. At this meeting the question of patents again came up, and after a temperate and satisfactory discussion it was agreed to keep up the prices.

Meanwhile, the drug store in Leith Street, which has caused all the trouble, continues to do a flourishing trade.

Elliot Hume, drysalter, Grassmarket, was examined in bankruptcy at the Sheriff Court on December 31, and he met his creditors at 2 York Place on January 12. Bankrupt has been three years in business, and his liabilities are now 864*l.*, and assets 247*l.*

Mr. W. L. Beaumont has succeeded Mr. Crowden as country traveller for Messrs. Clark & Pinkerton, Edinburgh.

Mr. Samuel G. Crowden, of Edinburgh, has been appointed by Messrs. Hodgkinson, Stead & Treacher as their representative in Scotland and the North of England, in succession to Mr. Frank Clark, who takes another journey for the same firm.

The employés of Messrs. T. & H. Smith & Co. held their annual social gathering in the Gymnasium Hall on the evening of Friday, January 8. About 170 were present, Mr. Smiles occupying the chair. A sumptuous tea was provided, and a series of magic-lantern views was exhibited. Songs were interspersed, and a very pleasant evening was passed.

GLASGOW.

Several persons have attempted to commit suicide with laudanum during the past month. One was successful.

ANDERSON'S COLLEGE.—The museum and Ewing's library are in a wretched condition; the former is totally disorganised, uncared for, and useless. The valuable library is

stored in a damp room, and will shortly be in a pulpy condition if not better cared for. The trustees have resolved to make some improvement.

The Botanic Gardens are not yet in a good condition financially, and the only hope for them is to get the City to take them over. Some change for the better is urgently required.

THE METHYLATED-SPIRIT CASES.—At the Justiciary Appeal Court, held in Edinburgh on December 18, Dr. James Downie, Canning Street, Glasgow, appealed against the conviction procured against him on September 6 (*THE CHEMIST AND DRUGGIST*, November, 1885). The question of law for the opinion of the Court was, whether the facts of the case amounted to the statutory offence of which appellant was convicted. Counsel for the Crown questioned the jurisdiction of the Justiciary Court, contending that the case, as an Excise one, should have been appealed to the Exchequer Court. The Bench took time to consider this matter.

OIL AS A FUEL.—Messrs. Cooper & Co., Howard Street, Glasgow, had their establishment lighted for the first time on December 30 by means of electricity, generated by the Thomson-Houston patent dynamo machine. The noteworthy fact connected with the apparatus is that the steam for the compound "Robey" engine which drives the dynamo machine is supplied from a locomotive-boiler in which oil is used as fuel. A tank for the oil is erected above the boiler, the oil being carried along in pipes and passed through a valve, where it unites with air drawn in by the suction of a steam-jet. The steam-pipe and the pipe with the oil are joined at the door of the furnace. The steam spreads the oil inside the furnace, and perfect combustion follows. To attract and distribute the oil steam requires to be raised, in the first place, by a coal fire. This, however, only occupies a few minutes. Thereafter, the oil is the only fuel used, and so great is the heat that the indicator in the steam-gauge goes up with perceptible movement. The nicety with which the heat can be regulated is also a feature. The boiler is fitted with the Fromentin feeder.

Messrs. Cooper & Co. are the firm which has done so much to reduce the price of "patents" in Glasgow. The firm does a large drug business.

FATAL ACCIDENT.—On December 30, as a van belonging to Messrs. John Mackay & Co., aerated-water manufacturers, of Edinburgh and Glasgow, was being driven along Gordon Street, the horse took fright and careered on to the pavement, throwing out the driver, and smashing two large plate-glass windows in the warehouse of Messrs. Smith. The driver (a young lad of sixteen, named William McCulloch) received such injuries that he died while being taken to the Royal Infirmary.

The creditors of the West-end Mineral-water Company, Anderson, Glasgow, receive a dividend on February 23, in the chambers of Brown, jun., Davies & Tait, 75 West Regent Street, Glasgow.

SHEFFIELD AND DISTRICT.

(*Special Correspondence.*)

During the past year there has been an unusual depression of trade in this district. In the latter part more especially has there been a great falling-away, and unusual quietness prevailing. In 1885 several businesses changed hands, while not a few shops have been closed altogether. There are now fewer blades of grass growing than has been the case for many years back, and the pasture is still bare. From the best-informed accounts the prospects of this year are not very cheerful. Already there are three businesses advertised for disposal, while several others are known to be in the market.

Bank holiday (Saturday, December 26) was generally observed as a closing day. There was the usual diversity of action among the trade in this matter on New Year's day.

Mr. Henry Horncastle, whose accident was noticed in your last, has succumbed to the injuries he received, and a verdict of "Accidental death" was returned at the inquest. Mr. Horncastle has met with a sad end to a sad career. He commenced business forty-five years ago in Fargate, and for

many years was in affluent circumstances, and the proprietor of one of the best businesses in the town. In his later years he has experienced many deprivations owing to his reversed circumstances, which he was in the habit of attributing to the deterioration of the drug trade. He leaves a widow.

Mr. B. R. Learoyd was quickly in the field to purchase Mr. Horncastle's business. It has not yet transpired what this gentleman intends doing with the same. He is already the proprietor of two establishments, and this latest addition is about 100 yards distant from his principal place of business in Lansdowne Road.

To alleviate the pain and distress resulting from convulsions, Mrs. Wright, of Grimethorpe, administered 4 drops of laudanum to her infant son, aged one month. The child had never had the drug before. It went to sleep on Sunday at eight o'clock at night, and never woke again, but died at noon on the following day. At the inquest, held on the 23rd ult., a verdict was recorded of "Death from an overdose of laudanum inadvertently administered to the child by its mother."

Perhaps it will tranquillise the perturbed spirit of the hon. sec. to the Sheffield Society to state that, on his peregrination to the Jessop's Women's Hospital, as reported in your last, he was accompanied by the senior vice-president of the Association, who, however, on viewing the large array of tender forms and fair faces, had neither the courage nor gallantry to proceed beyond the doorway of the lecture-room.

John Taylor Leigh, aged 60, Tinsley, was poisoned on the 22nd ult. by liquid ammonia administered by himself in mistake for medicine. He was under medical treatment for chronic bronchitis, and the medicine he was taking was kept on one end of the mantel-shelf, and at the other end there was a similar bottle containing ammonia. Deceased took a dose from the wrong bottle, and died after suffering great pain and being unconscious seven hours. Verdict, "Accidental death."

PERSONAL.—Mr. George Hirst, teacher of chemistry at the Central Higher School, has been elected F.C.S.—Mr. R. W. Watson, chemist, Angel Street, has taken into partnership his assistant, Mr. J. N. Harrison, who for some time has had the management of his branch business in Fullwood Road.—Mr. P. G. Pochin, chemist, Atlas Steelworks, was presented with a solid silver inkstand as a token of the good-will of his friends on the occasion of his resigning his position on account of ill-health.

Mr. Reuben Webster (59), landlord of Musenm Hotel, Orchard Street, the well-known taxidermist, and owner of one of the finest collections of birds and animals of any private individual in existence, died on the 23rd ult., after an illness of eighteen days' duration, directly attributable to blood-poisoning resulting from the constant using and inhaling of arsenic in the course of his work.

The B.P., 1885, was the subject of discussion at the last monthly meeting of the local Association. The debate was well maintained and carried over two nights, many points of interest being brought out and practically dealt with. A resolution expressing admiration of the work and appreciation of the successful efforts of the compilers failed to find a seconder. A suggestion that the various galenical groups, such as the extracts and pill-masses, form the subject for further meetings met with more support.

Talking of the B.P. reminds me of an evidence I have had that the 13,000 copies disposed of have not all gone into pharmaceutical hands. During a controversy with a pharmaceutical chemist in his own shop on the new work, I requested him to produce the volume to verify a statement I was making. Strange to say, he had no copy in the place, and did not intend procuring one, as, in his opinion, it was not worth while. He was the happy owner of two copies of the edition of 1864. I have heard of another case in which a registered chemist had no Pharmacopœia at all in his place.

POISONING CASES.—Martha Dickinson, 43 South Street, has committed suicide by taking laudanum on the 6th inst. She had attempted to commit suicide by the same means two years ago, when she bought the poison in pennyworths at different shops, until she got sufficient quantity. On this

occasion no trace of the poison was found in the house, or any clue as to where it was obtained.—An inquest has been held on the body of Ann Elliott (40), a single woman residing with her father at Cromford. The medical man had certified the death to be caused by apoplexy, when evidence was brought which showed clearly that some irritant poison like phosphor-paste had occasioned the death.

The students in the Sheffield School of Pharmacy may, or they may not, appreciate the action of the Council in granting them five weeks' vacation for the Christmas holidays. The fees charged at this school are low, the services of the lecturers being, to a great extent, gratuitous; but the Council should learn that earnest pharmaceutical students—far from being, like schoolboys, anxious to evade their tasks—look upon their studies as a serious matter of business, to be persevered in without such unnecessary interruptions. From December 1 to January 18 is almost one-fifth of the entire session.

On December 21, before the Sheffield magistrates, M. J. W. Blake, of 45 Abbeydale Road, Sheffield, of America nationality, was prosecuted at the instance of the General Council of Medical Education for having used the name and title of "dentist" without possessing the qualification required by law in this country. Evidence was adduced to the effect that some time ago defendant applied for registration under an American diploma, his claim being refused on the ground that this diploma was not recognised by the Council of Medical Education. Notwithstanding this refusal defendant opened an establishment in Sheffield, obtained practice, and was in the habit of advertising himself in the papers and by circulars as a dentist, adding the word "Philadelphia Dental College, U.S., America." Defendant relied upon a section in the Dentists Act exempting from it a person not ordinarily resident in the United Kingdom (in connection with which the other side showed that only lately defendant caused the tenancy of his house to be transferred from his own into his father's name), and also claimed that he had not represented himself as registered under the Dentists Acts, and that the prosecution had been instigated by "rival and jealous dentists." The magistrates considered an offence to have been committed, and did not consider that the words "graduate of the Philadelphia College" qualified the title "dentist." They, therefore, imposed a fine of 5*l.* and costs.

Are unqualified and unregistered dentists more dangerous to the public than the same class of irregular practitioners of pharmacy? or is the Dentists Act of more use to dentists than the Pharmacy Act is to pharmacists? or is it that the Council of the Dental Association are more alive to the interests of their members than the Pharmaceutical Council? A few fines of 5*l.* and heavy costs imposed upon some of the sham druggists in the town, who sail quite as near as did this Dr. Blake, both in appearance and title, would be a benefit to Her Majesty's subjects, a terror to these evil-doers, and a matter of simple justice to the legitimately engaged in the trade. If the local secretary will constitute himself a vigilance committee, and stimulated by the decision of the magistrates in this case to allow the Society he represents no peace until they take one of the typical cases of this description in hand, he would earn the thanks of many.

TIPTON.

EXCISE PROSECUTION.—Edwin Oakley, herbalist, Grot Bridge, was charged at the Police Court, on Monday, December 21, with exposing for sale medicines liable to stamp duty without having a licence. On November 9 he sold to an officer a box of Beecham's pills, and at the time had no licence. Mr. Kelly (supervisor) said that other shopkeepers complained that they could not stand the unlicensed competition of the defendant. The Bench imposed a fine of 3*l.*

TUNSTALL.

DEATH OF A CHEMIST UNDER CHLOROFORM.—Mr. John Booth, coroner, held an inquest at Tunstall, on Jan. 5, on the body of Mr. John S. Dixon, chemist, who died while under the influence of chloroform. Dr. Spanton, of Hanley, stated that he had attended the deceased, who was suffering from an abscess in the bladder. On two occasions he had admini-

tered anæsthetics to the deceased, the first for the purpose of examination, and the second with a view to an operation. The deceased came out of these applications sufficiently well to justify a third application for an examination and operation. On Sunday the chloroform was applied in the usual way for the third time by Mr. Partington, who assisted witness, and in about three minutes the subject became pale, and it was found that the heart had ceased to beat. Every possible effort was made to resuscitate him, but without avail. The deceased's complaint would, sooner or later, have terminated fatally. Mr. Partington, surgeon, and the deceased's nurse having given corroborative evidence, the jury returned a verdict to the effect that the deceased succumbed to a sudden stoppage of the heart whilst under the effects of chloroform, which had been properly administered by two duly-qualified medical practitioners. To their verdict the jury added an expression of sympathy with the widow and family of the deceased.

WIMBORNE.

A grocer's assistant, named Bennett, who varied the monotony of a public meeting on politics at Wimborne by throwing across the room a packet of pepper, which burst in the eyes of a constable, has had to pay four guineas for his amusement.

WORCESTER.

SEVERE COMPETITION.

In Worcester store prices in drugs are playing sad havoc with the trade. Mr. E. J. Kitson, a pharmaceutical chemist, well known, no doubt, to some of the wholesale houses, claims to be the pioneer of this style of trading, so far as this town is concerned. After various experiences he has lately settled down near his original quarters in Broad Street, where, under the style of the "City Drug Stores," he bids for public support by supplying patent medicines at lowest possible cash prices, and promising to dispense prescriptions at half the usual charges. Mr. Steward, High Street, whose shop had long been known as the old-established patent-medicine warehouse, after due consideration, finding that his patent trade was being affected, decided to compete with his formidable opponent. Column advertisements side by side appear in the local press—Kitson announcing himself as the cheapest chemist in the county, and Steward as the cheapest in the kingdom, quality and quantity considered. Added to this they each issue a monthly price-list of some forty or fifty pages. While war is thus being waged between them the other members of the trade quietly review the proceedings, wondering what will be the next move. Some fill their windows with patents marked at store prices, while a leading firm of dispensing chemists, whose business is situated almost opposite that of Kitson's, issue the following circular to their customers:—

George & Welch consider some explanation due to their customers and the public for maintaining full prices under the present system of co-operative trading (or, rather, the un-English system of under-selling). They regard the system as hazardous to those who engage in it (although many in self-defence have reluctantly done so), and unjust to the numbers whose limited trade prevent their entering upon it, for, though it may answer to the few, it means loss and ruin to the many. Co-operative stores and their system of trading are destroying much of the legitimate trade of the country; they are causing ruinous competition, distress, and pauperism, depreciating the value of all trades, and, consequently, the value of property. Their effects are and will continue to be of an alarming character to the trading community. With these facts it is right to adopt this system, or adhere to that of "live and let live"? George & Welch gratefully acknowledge all the favours they have hitherto received, and respectfully and earnestly solicit support to conduct business on safe and upright principles. G. & W. supply medicines only of guaranteed strength and purity, and endeavour to sustain the reputation for excellence which their house has ever possessed. Superiority of drugs and skill in dispensing are urged by the physician and give confidence to the patient; these can only be secured by fair prices and from reliable sources.

Broad Street, Worcester.

While all this is going on changes take place—one by one the competitors quit the scene. Some chemists try their fortunes in distant spheres, others retire on the hard-earned savings of their younger days. Thus, in little more than twelve months, five chemists' businesses in Worcester have ceased to exist.

CHEMISTS AND DRUGGISTS' TRADE ASSOCIATION OF GREAT BRITAIN.

A MEETING of the Executive Committee was held at Birmingham on December 14, 1885. Mr. W. G. Cross, President, in the chair; Mr. Joseph Maltby, Vice-President. Present:—Messrs. Arblaster, Barclay, Chapman, Churchill, Davis, Hampson, Harrison, Holdsworth, Jones, Parker, Paterson, and the solicitor (H. Glaisyer, Esq., LL.B.).

The death of Mr. T. S. Johnson, and the election of Mr. T. Barclay to the Birmingham Town Council, were the subjects of appropriate resolutions.

The report of the Finance Committee was read and adopted.

REPORT OF THE LAW AND PARLIAMENTARY SUB-COMMITTEE.

Prosecution of a Chemist.

Since the last meeting of the Executive your Sub-Committee have held seven meetings. Information having been received at the office that Mr. Hill, a member of the Association residing at Scarborough, was threatened with proceedings for damages, which it was alleged he had incurred by selling a worm powder and some easter oil to a child, which had made it seriously ill, the secretary was instructed to proceed to Scarborough and investigate the case on the spot. On his return he reported fully to your Committee upon the facts of the case, when a resolution was unanimously passed instructing the solicitor to defend Mr. Hill should proceedings be commenced against him. Recent advices from Scarborough lead your Committee to think that the secretary's visit to that town has been the means of causing plaintiff to forego the action, as no further communication has been received by defendant from plaintiff.

Sale of Food and Drugs Act.

At the last meeting of your Committee held on November 25 last they investigated the case of Mr. Tomkys, a member of the Association residing at Haslingden, against whom a summons had been issued, under the Sale of Food and Drugs Act, for having sold 2 oz. cream of tartar alleged to be not of the nature, substance, and quality of the article demanded by the purchaser. At the time the inspector made the purchase he offered to leave with the defendant a sealed sample, which defendant refused. The county analyst certified that the cream of tartar sold contained 16 per cent. of foreign salts, viz.:—8 per cent. calcium sulphate, 6 per cent. calcium tartrate, and 2 per cent. alum. On communicating with Professor Attfield, he stated "that both kind and extent of adulteration were indefensible"; adding, "I have had much experience in analysing cream of tartar. It should contain 92 or 93 per cent. of real cream of tartar, but there should not be 8 per cent. of sulphate of lime present, and certainly not 16 per cent. of total impurities. I have looked up precedents and authorities. I am of opinion that, for all reasons, defence would be undesirable in this case." Your Committee passed the following resolution—

That, as Mr. Tomkys most unwisely refused a sealed sample of the drug purchased when offered by the inspector, the Association is compelled to accept as correct the report of the county analyst; and the Committee cannot undertake to defend the sale of a sample of cream of tartar containing so large a percentage of impurities as mentioned in the summons."

A copy of this resolution was communicated to Mr. Tomkys by next post. Mr. Tomkys, under date December 2, wrote a long letter, which was included in the report, stating that he was pleased to say the case was dismissed by the Haslingden Bench, and complaining of the action of the Urgency Committee in refusing to defend him.

Trade Marks.

In accordance with the resolution passed by the Executive at their last meeting, the secretary wrote to the Comptroller under the Patents, Designs, and Trade-marks Act asking him to call upon applicants for certain marks to file a disclaimer to any rights to the exclusive use of the following words:—"Worm Cake," "Nerve Food," "Composition Essence," "Peptonising Powder," and "Lime Juice Saline," to which the Comptroller replied that he would call upon applicants to disclaim the words "Worm Cake" and "Peptonising Powder"; that the words "Composition Essence" had already been disclaimed, and that in the event of the Association objecting to the registration of the marks containing the words "Nerve Food" and "Lime Juice Saline," it would be necessary to lodge a formal notice of opposition to the registration of the words under section 69 of the Act. The Committee after careful consideration thought it unnecessary to file notice of opposition to either of these marks. Your Committee having taken exception to the registration of the words "Pectin, an Aperient Marmalade," in plain block type, the secretary entered into a correspondence with the Registrar in reference to that proposed mark, which resulted in the officials at the Trade-marks Office stating that the applicant for the registration of the mark had intimated to the Comptroller that he did not intend to proceed with his application for the registration of the words in question. Your Committee have from time to time communicated by circular to the Executive the steps that have been taken to endeavour to raise a Trade-marks Guarantee Fund and also the results. It will be remembered that 86% only was received, and that your Committee felt that under the circumstances the Association could not continue to carry on opposition to the registration of marks, and asked the Executive what steps should be taken in reference to the amount received. Acting on the recommendation of the majority of the executive, obtained by letter, in reply to a question on the subject, the following resolutions were unanimously passed, and in due course communicated to the members of the Executive:—

That a circular be issued to the donors to the Special Trade-marks Fund stating that as the amount subscribed is insufficient to enable the Association to continue to oppose the registration of trade-marks, the donations received will be returned to the individual donors unless they see their way to allow the Association to utilise it in replacing the funds of the Association already expended in successfully opposing marks important to the trade, such as "Condy's Fluid," "Menthol," "Chiro-podyne," "Persian Sherbet," "Mezereon," "Tonic and Nerving Essence," "Extract of Limes and Glycerine," "Malt Food," "Pectin," &c., and also in meeting the costs which will fall upon the Association in opposing in the Law Courts the registration of the "Cherry Balsam" mark.

That the secretary be instructed to wait upon the trade-mark officials, and explain to them the circumstances which have compelled the Association to relinquish their opposition to trade-marks containing elements common to the trade.

The secretary having communicated with all the donors to the special fund, donations to the amount of 77l. 0s. 6d. have, in accordance with their request, been placed to the ordinary funds of the Association, 12l. 4s. 6d. has been returned to the donors, leaving 4l. 18s. instructions as to the disposal of which have not yet been received.

At a subsequent meeting of your Committee, the secretary stated that he obtained an interview with the Registrar of Trade Marks on the 2nd instant, and explained fully the present position of the Association in the matter, when the Registrar stated that he would still be prepared to carry out the arrangement made with the Association, and detailed in his letter of July 23 last, but that he could not undertake to go further, consequently that in the event of an applicant stating that he had property in a mark or portion of a mark which the Association thought common to the trade, he could not undertake to refuse its registration, when after considerable discussion your Committee unanimously resolved:—

That the secretary be instructed to continue to issue to the Executive extracts from the *Trade Marks Journal* as heretofore, with an accompanying circular requesting the members to mark and return to him any applications which contain elements common to the trade, and that the secretary be empowered to exercise his discretion as to the cases in which the Comptroller be asked to call upon applicants to file disclaimers.

Messrs. Condy & Mitchell having renewed their application to be allowed to register the words "Condy's Fluid" in plain block type as a trade-mark for goods in Class 2, the secretary wrote to the Comptroller as follows:—

Chemists and Druggists' Trade Association of Great Britain,
23 Burlington Chambers, New Street, Birmingham, November 26, 1885.
The Comptroller, Patent Offices, 25 Southampton Buildings, W.C.

SIR,—I am much obliged for Mr. Tomlinson's letter of the 20th inst., enclosing *Trade Marks Journal*, No. 339, and directing my attention to an advertisement, appearing therein, relating to an application for the registration of the words "Condy's Fluid" in plain block type, as a trade-mark for goods in Class 2.

I am instructed by the Trade-marks Committee of this Association to express surprise at the reappearance in the *Journal* of an advertisement relating to an application for this mark.

On its first appearance in *Journal* No. 357, in January last, I filed notice of opposition to its registration, stating fully the grounds on which I based my objection to the mark being registered as the sole property of applicants. In your letter of August 20 last you state that, as no counter statement had been lodged to my opposition, the application in question of Messrs. Condy & Mitchell (Limited) was, under section 69 (2) of the Patents, Designs, and Trade-marks Act, 1883, deemed to be abandoned and had been noted accordingly, and we consequently were under the impression that the application had finally lapsed.

Kindly inform me if it is usual, when an application for the registration of a mark has been made, notice of opposition to its registration filed, and the application abandoned in accordance with the section of the Act above referred to, for the office to pass and advertise in the *Journal* a second application for the mark in every respect similar to the first.

I am also instructed to ask you to be good enough to peruse my notice of opposition (No. 739), and then inform me if, in your opinion, the fact therein set forth showing the grounds on which my opposition to the mark was based are not sufficient to warrant you in refusing to proceed with the registration without calling upon the trade to again take the matter in hand.

I am, sir, yours faithfully.

W. F. HAYDON,
Secretary.

To which letter the Registrar replied, stating that the Comptroller had no power under the Act or rules to refuse an application on the ground that the previous application of the same interest had lapsed through opposition, nor did he think that the previous statement of opposition filed by the Association would justify the Comptroller in stopping the application, and that he regretted, under the circumstances that he must leave the Association to renew their opposition.

It was moved by Mr. DAVIS, seconded by Mr. PARKEE and unanimously resolved—

That the report of the Urgency Committee be received.

Mr. BARCLAY said that the Scarborough case was only one of a number of intricate cases that the Urgency Committee had from time to time to deal with. Fortunately the Association had the services of a secretary who was always willing to go anywhere, and was generally able to surmount such difficulties as came in his way, and to prepare a clear statement of facts, upon which they were invariably able to come to some decision. With regard to the case of Mr. Tomkys, the Urgency Committee decided that it was on which they could not defend. They found there was no case on record of a successful defence of the sale of cream tartar containing such an amount of impurity as 16 per cent. Moreover, Professor Atfield's report quite prevented their defending the case. He hoped it would go forth to the trade that, had the defendant kept a sealed sample of the cream tartar when offered by the inspector, the result might have been different, as it would have been analysed by Professor Atfield, and they would have had an independent analysis. He thought it could not be too strongly urged upon vendors of drugs and medicines that they should be careful to accept samples in all similar cases. As to the question of trade marks, both the Executive and the Urgency Committee have gone into the matter at great length. A great deal of good work had been done by the Association, and they had prevented many important marks from being registered which if registered, would have proved injurious to the trade. Looking ahead, it was found that they would be continually called upon to deposit large sums of money in the shape of bonds for the purpose of meeting law costs. At the last meeting of the Executive 200l. was removed from the ordinary funds, and a resolution was passed ordering

guarantee fund to be raised to enable them to do the work without running the risk of being involved in large pecuniary losses without funds. But he regretted to say the response made by the trade had been very inadequate, showing that the trade was either indifferent to the question of trade-marks, or that they had not confidence in the Executive. He could assure them that the work of the Executive Committee had been of a very difficult nature. After what had been done in reference to Condyl's Fluid, the Urgency Committee felt that the time had arrived when the Executive should be called together again. It appeared from correspondence that had been read that the Association was simply barking without being able to bite. The Association could not go forward without funds, and the trade had refused to supply the funds, therefore the Association would be compelled to cease opposing the registration of marks.

Mr. HARRISON and Mr. PATERSON added some remarks in a similar sense.

Mr. HAMPSON said he felt that it would be impossible to carry on these trade-mark cases unless they could collect 200*l.* three or four times a year. With such very inadequate funds at their disposal he did not see how they could proceed further in the matter. He believed the Association had done a good work, and he was extremely obliged to the Urgency Committee for the great care and constant consideration which they had given to this question of trade-marks. The ordinary chemist and druggist did not realise the importance of the issue. With regard to the Condyl's fluid question, he believed that several chemists were not quite satisfied in their own minds that it would be wise for the Association to take the course suggested against Messrs. Condyl's people.

In reply to a question, the SECRETARY said that it would appear from the *Haslingden Gazette* that the summons against Mr. Tomkys had been dismissed on a side issue. The defendant supplied the inspector with hydrochloric acid, as well as cream of tartar, and, with reference to one or both of these articles, defendant had stated to the inspector before supplying him "that he did not sell it as a pure substance." Defendant's solicitors argued that this remark was made in reference to the cream of tartar. The magistrates decided that, as "there appeared to be some doubt whether Mr. Tomkys had spoken of the hydrochloric acid or of the cream of tartar to the superintendent, they would dismiss the case."

It was moved by Mr. HARRISON, seconded by Mr. PATERSON, and unanimously resolved—

That the Executive Committee, having heard the letter read from Mr. Tomkys, is of opinion that the Urgency Committee exercised a wise discretion in refusing to defend the summons issued against him under the Sale of Food and Drugs Act for having sold cream of tartar alleged to be not of the nature, substance, and quality of the article demanded by the purchaser.

That Mr. Tomkys's letter of the 2nd instant be published in the trade journals, with the report of the proceedings of this Committee, unless he objects to that course being adopted.

It was moved by Mr. BARCLAY, seconded by Mr. HAMPSON, and unanimously resolved—

That the report of the Urgency Committee be adopted and entered on the minutes.

TRADE MARKS.

The PRESIDENT said that the next matter on the agenda paper was "to take into consideration the present position of the Association in reference to trade-marks, and to decide what action shall be taken in view of the renewed application for the registration of the words 'Condyl's Fluid.'" He thought it would assist the Committee if they knew precisely what their financial position was.

The SECRETARY said that the total assets of the Association amounted to 423*l.* 9*s.* 11*d.*, of which 200*l.* was locked up in connection with the bond for the "Cherry Balsam" case, and the remainder was at their bankers on current account.

Mr. GLAISYER said that the cost in connection with the "Cherry Balsam" case up to date would not be 100*l.*—probably not more than 50*l.*

The PRESIDENT then read a letter he had received from Mr. Ellinor, who thought that in the matter of trade-marks it would be better to leave the subject alone rather than that the action of the Committee should terminate in failure through want of funds.

Mr. BARCLAY thought that, in view of the position of the funds of the Association, it was not desirable to proceed with any opposition to the renewal of the words "Condyl's Fluid."

Mr. PARKER concurred in Mr. Barclay's suggestion, believing that Mr. Condyl had a perfect right to register his own name.

Mr. GLAISYER said: In my opinion he has no such legal right. Condyl obtained letters patent to protect the manufacture of a certain disinfecting fluid for a certain number of years. During that period he had the exclusive right of manufacturing this particular disinfectant, and giving it to the world under what name he pleased. Condyl's patent has now expired, and he has no exclusive right to make the disinfectant, and no proprietary right in the name by which the patented preparation has become known to the world. By this attempt to register the name given to the disinfectant he is endeavouring to prolong his monopoly.

The SECRETARY called attention to the fact that Messrs. Condyl had already registered labels as trade-marks containing the words "Condyl's Fluid."

Mr. GLAISYER said he is now attempting to register these words "Condyl's Fluid," and these words alone, in plain block type; so no question arises with reference to a special design.

The following resolution was then moved by Mr. HAMPSON and seconded by Mr. PARKER:—

That, in consequence of the position of the funds of the Association, and the indifference of the trade to the question of trade-marks, it is not desirable to offer further opposition to the registration of the proposed trade-marks.

The SECRETARY said, in the event of notice of opposition being filed to the application for the trade-mark "Condyl's Fluid," it must reach the Registrar's office before January 15 next.

The VICE-PRESIDENT said that in the report of the meeting he hoped the secretary would make it known that, if the members of the Association were willing to find funds, the Executive Committee were willing to oppose the marks.

In reply to a question the SOLICITOR said he thought they must win if they fought in Condyl's case.

Mr. HAMPSON said he had spoken to many members of the trade, and their feeling was that any opposition to the registration would be an interference with private property.

The resolution was then put to the meeting and carried.

A communication was read from a member of the Association, intimating that he was threatened with legal proceedings by Messrs. Burroughs, Wellcome & Co. for using the word "tablet" in connection with compressed goods, it being alleged that they had the right to the exclusive use of the word.

After some considerable discussion it was moved by Mr. BARCLAY, seconded by Mr. PARKER, and unanimously resolved—

That the solicitor be instructed to correspond with the solicitors of Messrs. Burroughs, Wellcome & Co., and report to the Urgency Committee.

THE MEDICINE STAMP ACT.

The PRESIDENT said the next business on the agenda paper was "To consider the advisability of steps being taken by the Association to amend the Patent Medicine Stamp Act in such a manner as to exempt from liability to stamp duty all medicines the composition of which is shown on the label covering them, notwithstanding that they may be recommended for the cure or relief of any disorder, leaving secret or occult preparations only liable to stamp duty."

Mr. BARCLAY said the present was an opportune time for considering the action of the Inland Revenue authorities with regard to patent-medicine stamps. Take, for instance, "Gregory's Powder." If they gave its composition and said it was beneficial for indigestion they must use a stamp; the same with rhubarb pills, and all other preparations of the Pharmacopœia. He thought it would be well if they could go, as an Association, before the House of Commons, and tell them this was a real public grievance, as well as harassing to chemists and druggists. He thought common medicines, if sent out with plain instructions, would be more useful to the public, and should not in consequence bear the patent-medicine stamp. Of course in the case of secret medicines

it was a different matter. Under Lord Campbell's Act any chemist who gives advice is personally responsible for any injury which may result to the person who receives it. That would be a sufficient protection to the public. He moved:—

That the Urogeny Committee be empowered to consider the question of the working of the Patent Medicine Stamp Act, and take such steps as they may deem advisable to endeavour to extend the exemption from stamp duty, now allowed to simple drugs, to all preparations of the British Pharmacopœia, either alone or in combination, provided the composition of the medicine is shown on the label attached to it, notwithstanding that it be recommended "for the cure or relief of any disorder."

Mr. PATERSON said he thought the subject was of considerable importance, and he was afraid they would not be able to dissociate it from the whole question of patent medicines. He thought some steps should be taken in connection with some member of Parliament, Dr. Farquharson for instance, to introduce a Bill into the House of Commons. He thought they should get an experienced draughtsman to draw up a Bill, and have it brought before the House at an early day; and he did not think the expense would be very great.

Mr. HAMPSON said that the Privy Council were anxious to do away altogether with the stamp duty, but the Treasury would not listen to such a proposal.

Mr. HARRISON, who seconded the resolution, said it seemed to him absurd to stamp any medicine made up according to the Pharmacopœia.

Mr. CHURCHILL hoped the Association would look carefully into this matter. It would be a serious thing if the patent-medicine stamp were abolished. Under the existing arrangements the sale of patent medicines was confined to licensed dealers, and the Stamp Acts prevented hucksters competing with chemists and druggists by selling small quantities of patent pills, &c.

The resolution was then put, and carried unanimously.

Several letters were read from members of the trade, and the secretary was instructed as to the manner in which he should deal with the same.

The secretary wishes to add to the foregoing report that, in reply to an inquiry addressed to Mr. Tomkys, of Haslingden, that gentleman has refused to allow his letter of December 2 last, referred to in the report of the Urogeny Committee, to be published; and that the following communication from the solicitors of the Association in reference to the "Cherry Balsam" trade-mark has been received at the office:—

[Copy.]

26 Waterloo Street, Birmingham.
December 22, 1885.

Cherry Balsam.

DEAR SIR, — We have much pleasure in writing to inform you that the applicant J. P. White has announced that he will not proceed further with his summons, but will abandon his application to register, and will pay the opponents' taxed costs. We shall obtain an order to this effect in due course.

Yours faithfully,

W. F. Haddon, Esq.

(Signed) GLAISYER & PORTER.

A DRUG-LIST OF THE SEVENTEENTH CENTURY.

I HAVE in my possession an old Pharmacopœia Londinensis, published in 1627, but still in good preservation. It is demy quarto, 206 pages, and has an elaborately-engraved title-page. In 1665 this book seems to have belonged to one Robertus Ashton, as it bears his name in splendid flourishes on the first blank leaf. A little further on comes another fly-leaf, on which is written in Old English characters the list of medicines and prices whereof I enclose a copy, thinking it may be interesting to modern chemists. At first the caligraphy was a complete puzzle to me, and seemed to defy my efforts to decipher it, but presently one word came to light and then another, till the whole mystery was laid bare to my persevering scrutiny, and with aching eyes I gloated over the unearthed treasure concealed under crabbed characters and slippery orthography by that druggist of the

olden time. Pleased with my success, yet not willing to enjoy a selfish gratification, I was impelled to send you a copy of this list, which probably contained Robert Ashton's stock-in-trade. On another blank page Robert Ashton gives us, in his own writing, a charm for the "toothake," as follows:—

"Peter stood at the gate of Jerusalem, and Jesus passed by, and Peter said unto Jesus, lord, my tooth akes and Jesus said unto Peter arise and follow mee and I will give thee the medicine for toothake; so they that none either say or read these shall never be troubled with tooth again."

Amongst the *Aquæ Compositæ* in this old Pharmacopœia is one entitled "*Aqua Cordialis Frigida Saxonie*," which contains no less than twenty-five ingredients; there are also many electuaries, with upwards of fifty; but the "*Antidotus Magna Matthioli adversus Venena & Pestem*" throws all these into the shade, as it takes 127 ingredients to make it complete. It is refreshing to contemplate the absolute peace and security of Robertus Ashton in this year 1665, thus armed a hundredfold against the plague that was then desolating the metropolis.—JOHN J. FISHER, 29 Bank Street, Carlisle.

The following is the list referred to:—

	s.	d.
3j. Spirit Absinth	00	9
3j. Spirit Cariophil	01	0
3j. Oleum Bac. Juniperis	00	6
3j. Lapis Clivis	01	0
3j. Jalap	01	0
3j. Sene	00	10
3j. Turbith Officinatum	02	0
3j. Machocan	00	6
3j. Babarbum	05	0
3j. Dagridium	02	0
3j. Gambogia	01	0
3j. Mastick	01	0
3j. Sanguis Draconis	01	6
3j. Mirbe	01	4
3j. Sir. Diacodium	00	4 or 3
3j. Sir. Rosar. Solutine	00	6
3j. Sir. Violar.	00	6
1 lb. Liquoris	02	0
1 lb. Sem. Seneculis	02	6
1 lb. Ung. Agrippæ	06	0
1 lb. Diapalma	01	10
1 lb. Diachylon cum Gummi	06	08
1 lb. Sticticum Paracelsi	06	8
1 lb. Mellilot Simplex	02	0
3j. Mithridatium	00	10
3j. Diaseordium	00	6
1 lb. Confectio de Barberis	02	0
3j. Electuary Resumptivum	00	6
3j. Oleum Violaecum	00	4
3j. Oleum Absinthii	00	2
3j. Oleum Rosar.	00	2
3j. Oleum Anethinum	00	2
3j. Oleum Spica	00	4
3j. Oleum Terebinthi	00	4
3j. Oleum Petroleum	00	6
3j. Oleum Scorpionis	00	6
3j. Oleum Myrtillorum	00	6
3j. Oleum Mastichinum	00	6
3j. Mareurius Vitia	08	0
3j. Mareurius pulvis	04	0
3j. Stibium	00	6
3j. Spirit of Saffron	04	0
3j. Confectio Alkermis	08	0
3j. Mass Pillul Cochlie	02	0
3j. Mass Pillul Aurea	02	0
3j. Pulvis Sanctus	02	0
3j. Pulvis Radul. Holland	02	0
3j. Hiera Piena	02	4
6 gr. Musk	03	0
1 lb. Burgonide Pitch	01	0
20 gr. Bezoar alt.	10	0
1 lb. Bolus Verus	03	0
1 lb. Ung. Basilicon	02	0
1 lb. Dealtha'a	02	0
1 lb. Ung. Apostolorum	06	0
1 lb. Ung. Popalneum	02	0
1 lb. Ung. Martiadum	06	0
1 lb. Lignum Sasafragium	02	0
1 lb. Sem. Canis	01	0
3j. Bosar. Sicar.	00	9
3j. Oleum Nucis Moschatæ	01	00

BRITISH PHARMACEUTICAL CONFERENCE.

A MEETING of the Executive Committee was held at 17 Bloomshury Square, W.C., on Wednesday, December 16, at 4 P.M. Present: Mr. Thomas Greenish, president, in the chair; Professor Attfield, Messrs. Atkins, Benger, Carteighe, Ekin, Naylor, and Symons; and Mr. Plowman and Dr. Thresh (hon. gen. secs.).

The minutes of the previous meeting were read and confirmed.

Letters regretting inability to attend were read from Messrs. Dott, Groves, Hills, Mabon, Stephenson, Perry, Umney, and Williams.

It was decided that, following the usual custom, the business of the Conference at Birmingham should commence on the Tuesday preceding the meeting of the British Association. The date was therefore fixed for August 31, 1886.

Mr. Louis Siebold, F.I.C., F.C.S., was re-appointed editor of the Year-book of Pharmacy for 1886.

A letter was read from the printers of the Year-book of Pharmacy stating that a few copies of the 1885 volume would probably be ready for distribution by December 30. As all the copies of the Year-book could not be distributed at once, it was decided that they should be delivered in alphabetical order to those members who at the time should have paid their subscriptions for the current year.

The death of Mr. L. B. Bush, colonial secretary for New South Wales, was announced by the honorary general secretaries. The Committee expressed much regret at his loss, and the secretaries were instructed to write a letter of condolence to the widow.

A letter was read from Mr. D. S. Kemp, of Bombay, stating that he was just about to leave India; and he therefore resigned the secretaryship for Bombay.

The honorary general secretaries were instructed to make the necessary inquiries, and power was given to them and the President to fill the two vacancies.

The following resolution was moved by Dr. Thresh, seconded by Professor Attfield, and carried:—

That the secretaries be instructed to make arrangements with the Local Committee for a conversazione and reception by the President of the Conference at the Birmingham meeting, to be held the evening preceding the formal opening of the Conference.

Several letters were read from absent members of the Committee, warmly approving of the project. In the discussion which followed it was shown that if the conversazione were held some modification of the programme would be necessary. The hon. gen. secs. considered that this modification could be made without any great inconvenience.

A letter was read from Mr. Barclay, of Birmingham, giving an outline of the proposed arrangements for the forthcoming Conference meeting. These proposed arrangements were generally approved by the Committee.

A conversation arose concerning visits to works and places of interest during the progress of the general meeting. The hon. gen. secs. were instructed to request local committees to make no arrangements for such visits which would in any way clash with the business proceedings of the Conference. In connection with Mr. A. E. Robinson's paper, on "Permanent Solution of Ferrous Iodide," some correspondence between the hon. gen. secs. and the author was read. Mr. Robinson stated that in his application for a patent for improvements in the preservation from oxidation of certain salts of iron the iodide was specifically excluded "in any case for any purpose." Mr. Robinson's voluntary explanation was considered entirely satisfactory.

Mr. Plowman expressed a wish to retire from the general secretaryship at the termination of the Birmingham meeting.

It was decided that a presentation copy of the Year-book of Pharmacy should be sent annually to the Pharmacy Board of New Zealand.

Some donations were acknowledged, and nineteen gentlemen were elected to membership.

A meeting of the General Index Committee was subsequently held. Present: Mr. Thomas Greenish, President of the Conference, in the chair; Messrs. Benger and Carteighe, Dr. Thresh, Mr. Plowman (secretary to the Committee), and Professor Attfield by invitation.

The minutes of the previous meeting were read and confirmed.

Many matters of detail in connection with the Index were settled, and Mr. Passmore submitted some specimen proofs, and presented a report in which he stated that the Index would probably be ready for distribution in April next year.

THE REDWOOD TESTIMONIAL FUND.

WE have already reported the preliminary steps which have been taken to promote a testimonial in honour of Dr. Theophilus Redwood on the occasion of his retirement from the Professorship of Chemistry and Pharmacy to the Pharmaceutical Society, and to commemorate his eightieth birthday, which, we understand, occurs in March next.

It is intended, if subscriptions are sufficiently liberal, to found a Redwood scholarship, and to have the Professor's portrait painted. Dr. Redwood has been so intimately associated with the affairs of British pharmacy during the past half-century that his record must be familiar to all who are interested in its progress. The Testimonial Fund Committee have drawn up a brief sketch of his career, which, we are informed, will shortly be widely circulated, with a request for donations. We fully expect the subscription will be a popular one in the trade, and will indicate the respect which is generally entertained for Dr. Redwood's hearty sympathy with all sections of pharmacists, for his pluck and endurance, and for his eminent services. The circular alluded to will give the subjoined particulars.

In the year 1842 Dr. Redwood was appointed Professor of Pharmacy to the Pharmaceutical Society, and in 1844 Director of the Chemical Laboratories. In 1846 he succeeded the late Professor Fownes as Professor of Chemistry. In these several capacities—at the first with Fownes, Pereira, and Thomson—he laboured earnestly, and with marked success, to promote the cause of scientific education in pharmacy, and at the present time the majority of noteworthy pharmacists, many medical men, and not a few scientific chemists, owe much of their early scientific knowledge to his teaching.

Professor Redwood's official connection with the Chemical Society dates from the year 1852, when he was appointed secretary in conjunction with the late Sir Benjamin Brodie, a post which he held, subsequently with Professor Odling, until 1865, when he undertook the duties of treasurer until 1870. In 1846 the Cavendish Society was founded, with Professor Redwood as secretary, a post which he retained until the dissolution of the Society in 1872.

Professor Redwood's association with the British Pharmacopœia began in 1854, when he acted as secretary to the Pharmacopœia Committee, which was appointed by the Pharmaceutical Society at the suggestion of the Royal College of Physicians. The committee held its sittings up to 1862, working from the year 1858 in conjunction with the Medical Council. In 1865 Professor Redwood was appointed by the Medical Council to edit a new edition of the British Pharmacopœia, which appeared in 1867, the edition, with addenda, which appeared in 1874, and, again, the recent edition of 1885.

Professor Redwood's "Supplement to the Pharmacopœia" (8vo, 1,118 pp.) is a book which has long been out of print, but a book which had a world-wide reputation as an encyclopædia of materia medica. The first edition appeared in 1847, the second in 1848, the third and last in 1857; each edition consisted of 3,000 copies. In 1840 Professor Redwood published a manual of "Practical Pharmacy," founded on that of Dr. Mohr. In 1872 an abridged edition of Pereira's *Materia Medica* was published, to which Professor Redwood contributed the chemical and pharmaceutical portion. In 1841 Professor Redwood became editor (with Mr. Jacob Bell) of the *Pharmaceutical Journal*, and continued in this capacity until 1870. Its pages bear witness to the extent of his contributions to pharmacy and to the sciences on which it depends.

In 1856 Professor Redwood, in conjunction with Professors Graham and Hofmann, was appointed to report to the Chairman of the Board of Inland Revenue on the "Supply of Spirit Free from Duty." This led to the exemption of methylated spirit from Government duty, and thus accelerated the progress of many branches of industry as well as scientific research.

We are asked to announce the following preliminary list of subscriptions:—

	£	s.	d.		£	s.	d.
Abel, Sir F. A., C.B., F.R.S.	3	3	0	Harker, Stagg & Moss	10	10	0
Abraham, A. C.	2	2	0	Hearon, Squire & Franks	5	5	0
Acland, Sir Henry, K.C.B., F.R.S.	5	5	0	Herrings & Co.	2	2	0
Adams, F.	1	1	0	Hill, Arthur B.	10	10	0
Allen, C. B.	3	3	0	Hills, Thomas Hyde	5	5	0
Amos, D.	0	10	0	Hills, Walter	1	1	0
Atkins, S. R.	5	5	0	Hinds, J.	0	10	6
Attfield, Professor, F.R.S.	5	5	0	Hofmann, Prof., D.C.L., F.R.S.	3	3	0
Baily, E.	1	1	0	Holmes, E. M.	2	2	0
Baldock, J. H.	1	1	0	Hopkin, W. K.	5	5	0
Barnard, J.	5	5	0	Hunter, J. C.	0	5	0
Barnes, Benjamin T.	3	3	0	Ince, Joseph	2	2	0
Barron, P.	10	10	0	Jackson, A. H.	0	10	6
Barron, Harveys & Co.	5	5	0	Jenner, Sir W., K.C.B., F.R.S.	3	3	0
Bascombe, F.	1	1	0	Kinnimont, A.	2	2	0
Basker, J. A.	1	1	0	Lawrence, W. P.	0	5	0
Baxter, G.	1	1	0	Luff, A. P.	2	2	0
Benger, P. B.	2	2	0	Maben, T.	1	1	0
Bentley, Professor	5	5	0	MacLagan, Douglas, M.D., F.R.S.E.	3	3	0
Bevan, C. F.	0	10	0	MacCrimble, T.	1	1	0
Bird, Augustus	10	10	0	Macfarlan, J. F., & Co.	10	0	0
Bishop, A.	2	2	0	Martin, N. H.	5	5	0
Borland, J.	3	3	0	May & Baker	5	5	0
Borland, J., jun.	2	2	0	Martindale, W.	5	5	0
Bottle, Alexander	3	3	0	Mead, C. J.	1	1	0
Bourdas, I.	10	0	0	Metcalf, E. H.	1	1	0
Bowen, J. W.	3	3	0	Metcalfe, W. A. H.	3	3	0
Brearey, A. W.	1	1	0	Odling, Prof., M.A., F.R.S.	5	5	0
Brembridge, Elias	5	5	0	Pasmore, F.	2	2	0
Brembridge, Richard	2	2	0	Pittman, Sir Henry, M.D., F.R.C.P.	2	2	0
Brooke, Sir W. O'Shaughnessy, M.D., F.R.S.	3	3	0	Plowman, Sidney, F.R.C.S.	1	1	0
Bullock, J. Lloyd	5	5	0	Poehlin, H. D.	10	10	0
Burrows, Sir G., Bart., M.D.	2	2	0	Prior, G. T.	1	1	0
Butt, E. N.	5	5	0	Radley, W. V.	2	2	0
Carteighe, Michael	10	10	0	Ransom, W.	2	2	0
Chater, E. M.	1	1	0	Rees, G. Owen, M.D., F.R.S.	2	2	0
CHEMIST AND DRUGGIST	10	10	0	Reynolds, R.	2	2	0
Constance, E.	1	1	0	Robbins, John	5	5	0
Corder, O.	3	3	0	Robinson, R. A.	3	3	0
Cortis, A. B.	2	2	0	Roscoe, Sir Henry, M.P., F.R.S.	1	1	0
Crookes, W., F.R.S.	2	2	0	Sandford, G. W.	5	5	0
Davenport, Horace	2	2	0	Savage, W. D.	1	1	0
Davenport, J. T.	5	5	0	Savory & Moore	5	5	0
Davies, R. H.	3	3	0	Schacht, G. F.	3	3	0
Deck, A.	1	1	0	Senior, A., M.D.	1	1	0
De la Rue, Warren, D.C.L., F.R.S.	5	0	0	Shenstone, W. A.	2	2	0
Down, J. Langdon, M.D., F.R.C.P.	5	5	0	Stocken, J.	5	5	0
Duncan, W.	1	1	0	Squire, A. H.	5	5	0
Dunstan, Professor W. H.	5	5	0	Squire, Peter W.	5	5	0
Farries, T.	5	5	0	Sutton, F.	1	1	0
Fletcher, F. W.	5	5	0	Symes, Charles, Ph.D.	3	3	0
Fletcher, J.	2	2	0	Symes & Co.	3	3	0
Flux, William	3	3	0	Symons, W. H.	3	3	0
Foster, W., M.A.	1	1	0	Taylor, G. S.	3	3	0
Fraser, D.	3	3	0	Tanner, A. E.	2	2	0
Gale, S.	5	5	0	Thresh, J. C. D.Sc.	2	2	0
Garrod, A. B., M.D., F.R.S.	3	3	0	Tilden, Professor, D.Sc., F.R.S.	1	1	0
Gerrard, A. W.	3	3	0	Turner, C. E.	1	1	0
Gibbons, G.	0	10	6	Virgo, C.	2	2	0
Giles, R. W.	2	2	0	Ward, W.	1	1	0
Gladstone, J. H., Ph.D., F.R.S.	5	5	0	Watts, J. M.A., D.Sc.	5	0	0
Gostling, T. P.	3	3	0	Webb, F. A.	2	2	0
Gostling, W. A., M.D., B.Sc.	2	2	0	Wells, Sir Spencer, Bart., F.R.C.S.	2	2	0
Green, J.	1	1	0	Whysall, W.	1	1	0
Greenish, Thomas	5	5	0	Wild, J.	0	10	6
Greenish, T. E.	2	2	0	Williams, John	10	10	0
Groves, T. B.	1	1	0	Wilkinson, W.	0	10	6
Gull, Sir William, Bart., M.D., F.R.S.	3	3	0	Woolley, H.	5	0	0
Gulliver, W.	1	1	0	Wright, A.	0	10	6
Hampson, H.	1	1	0	Wright, Layman & Umney	5	5	0
Hanbury, Cornelius	5	5	0	Wyley, W. F.	3	3	0
Harcourt, A. G. Vernon, M.A., F.R.S.	1	1	0	Young, R. Fisher	1	1	0

MY EXPERIENCE AS A DENTIST.

HOW did I become a surgeon-dentist? Well, that's the rub! I might almost say I was born one, for my earliest days were spent in watching my "Pater" turn out the ivories with a cork-screw, for such was my childish idea of the "key." Forceps were rarely used, and when they were it was often my luck to pick up the crowns, minus the fangs. School-days came, then apprenticeship in the North of England to a country chemist, who was too weak-nerved and tender-hearted to indulge in tooth-extracting: when I became an assistant in a quiet north-country village, I found a few old forceps kept for the purpose of pulling nails out of

packages. With these it was pastime for me to practise extracting nails, however tightly fixed, without breaking off the heads, and at which I became an adept. About this time I suggested that my employer should purchase a few new forceps and a key, hang up a card "Teeth extracted here," and allow me to do the extracting. At last, after considerable hesitation—for he was very diffident and extremely cautious—he agreed to find the instruments on condition that he should have all the cash they brought; and for bad work all the blame must fall on me; so, with his permission, I asked the advice of an old friend, a "proper dentist," what instruments were most suitable. He advised as follows:—

One instrument only for upper incisors, canines, and bicuspsids.

Two instruments (1 each for right and left) for upper molars and wisdom.

One instrument for lower incisors and canines.

One instrument for lower bicuspsids.

One instrument for lower molars.

Two instruments (1 each for upper and lower roots, stumps).

He did not wish me to have a "key," but my remembrance of the "key's" work was decidedly more satisfactory and clearer than of the forceps; so he said, as I was "key-mad," I had better get a child's key with reversible claws. I may here state never was judgment better shown, for with the foregoing stock-in-trade hundreds of teeth were successfully extracted, much to my employer's satisfaction of mind and pocket. We were in the midst of an agricultural district, to which the nearest town was distant some four miles, and our patients varied from the dainty lady to the strapping plough-boy. I must confess first ventures were rather nervous, but as time went on no tooth, however bad, was too bad for my unskilful hands to dare; and now, across the brink of over a quarter of a century, recollection of those days of practice comes fraught with keener delight than do the extractions of to-day, when, with a grand dental chair and improved apparatus, two or three of each kind of instrument, and all the latest varieties in pattern and shape, I remove the useless "grinders" from aching jaws.

As some practical remarks from my own experience may be of use to those engaged in pharmacy, where in country towns a surgeon-dentist may only go once a week, or in villages where he goes not at all, and where the poor, in pain, seek first the chemist's aid, I pen these lines. I find also, even in towns, many chemists do not extract teeth, and yet if they will they can. The time occupied is easily spared, and the cash for the operations is "all profit," after paying for the instruments. In the first place, to those essaying tooth-extracting "fear" must be entirely put aside, and a determination to do the best for the patient one can; and with the instruments mentioned before, and the addition of a tooth lance and probe, a very great deal can be accomplished, and that satisfactorily to the operated upon and the operator. An old dentist of whom mention has already been made gave me this advice: "When you go to take out a top tooth put the instrument carefully on and push upwards as if you expected it to come out beyond the hair: it never will, but you will often find that the tooth has jumped out into the instrument. With the lower teeth press downwards as if expecting the instrument to show itself below the chin and jaw. You will not see the instrument, but before you have got it half way down the tooth is out." Which, to my surprise, I found partially true.

It is well to get a correct knowledge of the permanent teeth, thirty-two in number (sixteen in each jaw), and their exact positions; anatomists divide them into four classes: incisors, canines, bicuspsids, and molars. They are arranged in the following manner: (1) Four incisors, the two central and most prominent teeth in front of the mouth, and two lateral incisors (one on each side of the central), which are smaller and not so wide. (2) The canines, or eye-teeth, being pointed and longer than the other teeth, one on each side. (3) The bicuspsids, or small double teeth, two on each side. (4) The molars, or grinding teeth, three on each side, which are much larger and stronger than the others, the last of which is called the "wisdom" tooth, and is generally the first to decay, though the last to appear.

In the extraction of teeth it should always be borne in mind that the outside of the jaw, or alveolus, in which the fangs are situated, gives way more freely than the inside,

consequently pressure of the instrument used should be inclined to the outside; also, take care to have a supply of warm water (never cold), with which the patient can wash out the mouth. It specially pleases them, and soothes the tender gums, as well as producing free bleeding, which promotes the discharge of matter when an abscess has formed.

One of the secrets of success in extracting teeth is to let the force of the instrument be laid on the root and not on the crown. For extracting lower incisors affix the forceps on the tooth (not over the gums), push it well down, press outwards, with a slight turn of the hand from side to side, lifting upwards, and the tooth is out. The extractor stands in front of the patient. With lower canines use same measures as with lower incisors, using more force; extractor stands facing tooth. With lower bicuspsids well press the forceps down, when tooth will frequently leave its socket by pressure alone. If the expected does not happen, move firmly but gently outwards, then inwards (to loosen the fangs), repeat until tooth is seen to be moving from its socket, then lift upwards. Operator stands in front of patients for right-side teeth. For left-side teeth it is more convenient for successful results for operator to stand sideways to the right of patient. For molar and wisdom teeth in the lower jaw, let the operator carry out directions as for lower bicuspsids, and place himself in similar position. After fixing the instrument on offending tooth, a little pressure on the nose of the forceps with the thumb or finger of the left hand, so as to wedge the instrument down between gum and tooth, will not only enable it to be grasped firmer, but give more certainty of its speedy extraction. For upper incisors use gentle force outwards and inwards, gradually moving the wrist as if to bring one side of the tooth to the front, and pull downwards. For upper canines do likewise. For upper bicuspsids press the instrument well on the root of tooth, move outwards and inwards, and as tooth is seen to give, use gently extractive force downwards. For upper molars and wisdom teeth, affix the forceps on the tooth to be extracted (do not mistake "right molar" instrument for left-side tooth, or *vice versa*), push well up to get a solid hold (three or four fangs are here), move outwards, then inwards, then outwards again, well bearing outside, when tooth will be seen to follow the instrument, and may at once be brought out. For all upper teeth operator should place himself to the right side of patient.

For lower stumps it will be necessary to press instrument gently down, then lift outwards. For upper stumps press forceps on and upwards gently, and carefully twist it round.

In reference to nitrous oxide and anæsthetics (chloroform and ether for inhalation), none are now used by me. Some few years ago an operation under chloroform came so nearly having a fatal termination that I have abolished them entirely. Ether spray for freezing the gum, when applied to a decayed tooth requiring extraction, when free from pain, will, to a certain extent, numb the pain of the operation; when applied to an aching tooth the pain caused by the application of intense cold is actually worse than the pain of extraction without it.

The "key" I seldom use now (though my favourite instrument in bygone days), except in those cases of upper or lower molars where one side has all decayed away; then, if there is only a little on which to secure the claw, the principle of leverage involved will accomplish its purpose. Should any who read this intend purchasing a "key," let one be chosen with reversible claws and an ivory handle (ebony handles occasionally break when key is being used, much to the annoyance of the operator, and the terror of the patient).

Plugging decayed teeth is of much importance, as it is frequently the only means of preserving them when beginning to decay (if no toothache has been felt), although removing it with a file or cutting instrument is considered far preferable in some cases.

Tartar is a discoloured coating which will form on teeth. It is composed of an earthy matter, and at first is of the consistence of jelly, and may be readily removed, but in time it becomes hard, and requires the skilled hand of the mechanical dentist to remove it without injury to the teeth.

The mechanical part of dentistry will be better learned by three months' tuition from a skilful mechanical dentist than from all the papers that could be written, and mechanical dentistry requires more time than a pharmacist in business can spare. Those chemists who have established themselves

as mechanical dentists have invariably found that one profession must be abandoned, and it has been in all cases of which I am cognisant, and they are not a few, that the shop has been sold, and rooms selected for carrying on "dentistry" alone, thereby proving that it pays better, or is more attractive, than pharmacy, though it may increase the chemists trade in preparations, &c., for the teeth.

NOTES ON SOME PHARMACOPŒIAL PROCESSES.*

By J. RUTHERFORD HILL, *Pharmaceutical Chemist, Apothecary, and Teacher of Pharmacy, Edinburgh Royal Dispensary.*

DURING the last few months we have been treated to a large amount of interesting, not to say amusing, criticism of the new British Pharmacopœia; but complaint has been made that it has been mainly destructive. Though less enticing and more difficult, there can be no doubt that constructive criticism is more profitable, and with that in view I have thought the following fragmentary "notes by the way" on some of the official processes might not be useless. As being most convenient, I have taken the processes in alphabetical order, beginning with—

ADEPS BENZOATUS.—The official process for making benzoated lard is both tedious and clumsy. I have found the following method expeditious, cleanly, and efficient. Make a tincture of benzoïn as follows:—

Benzoïn, in coarse powder	..	..	..	4 oz.
Rectified spirit	..	..	..	a sufficiency

Macerate the benzoïn in 15 fl. oz. of the spirit for four days, shaking frequently. Then filter and add sufficient spirit to make 1 pint.

To make adeps benzoatus—

Tincture of benzoïn (as above)	..	..	..	4 fl. drachms
Prepared lard	..	..	..	1 lb.

Melt the lard, add the tincture of benzoïn, and stir for a few minutes to dissipate the spirit. By this method such ointments as chrysarobin, iodoform, and oxide of zinc can be readily benzoated at the time of making.

The proportion of benzoïn has been reduced in the B.P. from 160 to 140 grains to each pound of lard, but it is still too high. Benzoated lard and ointments made by the above process have been found to keep quite as well as when made by the official process, and it saves both time and trouble.

BISMUTHI ET AMMONII CITRAS.—The official process for this salt cannot surely have been suggested by a practical chemist. The time and fuel lost in evaporating a large quantity of water may be avoided by adopting the following method:—

Citrate of bismuth	..	..	..	800 grains
Solution of ammonia	..	..	..	a sufficiency
Distilled water	..	..	..	"

Rub the citrate to a paste with a little water, add gradually, with constant stirring, just sufficient ammonia to dissolve the salt, evaporate on a water-bath to a syrupy consistency, and complete the process according to the official directions.

GLYCERINUM TRAGACANTHÆ.—The proportions of tragacanth and glycerine are too large in the official formula. The product is a very suitable excipient for pills containing only mineral powders, but in the case of pills containing vegetable powders it renders the mass too elastic, so that the pills are not easily rolled, and do not retain their shape when cut. I have used this valuable excipient for several years, and, as the result of considerable experience, I have found the following formula to yield a preparation which answers well in the greatest number of cases, and is at the same time less costly:—

Tragacanth (in powder)	..	..	..	60 grains
Glycerine	..	..	..	4 fl. drachms
Water	..	..	..	4 "

Mix the glycerine with the tragacanth in a mortar, add the water, and rub together until a jelly is formed.

* Read before the Edinburgh Chemists' Assistants' and Apprentices' Association.

LINIMENTUM CHLOROFORMI.—This liniment may be prepared in a few minutes as follows:—

Flowers of camphor	1 oz.
Olive oil	4 fl. oz.
Chloroform	5 fl. oz.

Dissolve the camphor in the chloroform, and add the olive oil.

MISTURA SENNÆ COMPOSITA.—The Pharmacopœia states that this preparation contains 1 oz. of sulphate of magnesia in 5 fl. oz.; but, if the official process is followed, that is incorrect. The Pharmacopœia of 1867 ordered the product to be made up to 1 pint, but the new process gives no indication as to what it should measure. I find that, following the official directions, the product measures 22½ oz., and contains, therefore, 1 oz. of sulphate of magnesia in 5½ fl. oz. To bring it to 1 in 5, as it is intended to be, the directions should be:—“Take of, infusion of senna, a sufficiency; dissolve the sulphate of magnesia in 12 oz. of the infusion with the aid of heat; add the liquid extract and the tinctures, and make up to 1 pint with infusion of senna.”

PILULA RHEI COMPOSITA.—The new official process for these pills has been subjected to pretty severe criticism, and, at first sight, I thought, with ample justification. Further experience, however, has shown me that some of these criticisms require modification. I have found that, after all has been said, it is possible to make a very presentable pill by following strictly the official directions. I show you two samples of pills made by one of my pupils with the full Pharmacopœial quantities of glycerine and treacle. One of these has been made for two months, the other for two weeks, and you will see that both are in perfect condition. They were exposed for about three days in an open pill-tray after being made, and have since been kept in the ordinary stock-bottle. When first mixed the mass does look very like turning out a mess, but it gradually stiffens, owing, no doubt, to the absorbent power of the powdered rhubarb. We must admit, therefore, that rhubarb pills can be made according to the official formula but, whether so large a quantity of excipient is necessary or desirable, is an entirely different question, to which I would be inclined to give a negative reply. The treacle is ordered by weight, and, although it does not say so, it is apparently intended that the glycerine should be by weight also, and this must be borne in mind, as it makes a considerable difference in the result.

SPIRITUS AMMONIÆ AROMATICUS.—This new process is undoubtedly one of the best features of the new Pharmacopœia, but the distillation is an entirely unnecessary trouble and expense. It has been said that the flavour and colour of distilled samples are superior; but this is not my experience, and, if the materials used be of good quality, it is perfectly easy to produce an article equal in every respect to that prepared by distillation. I have sometimes found that, when first prepared, a sample possesses a slight straw tint, which, however, gradually disappears; but, even if it were permanent, what does it matter? The attempt to get rid of it is surely a case in which “the game is not worth the candle.” The following is a convenient working formula for small quantities:—

Carbonate of ammonia	½ oz.
Strong solution of ammonia	1 fl. oz.
Volatile oil of nutmeg	34 minims
Oil of lemon	42 minims
Rectified spirit	15 fl. oz.
Water	3½ fl. oz.

Dissolve the oils in the rectified spirit. Reduce the carbonate of ammonia to small fragments, place it in a 10-oz. bottle, having an accurately-ground stopper, add the water and strong solution of ammonia, heat to 140° Fahr., shake till the carbonate is dissolved, allow to cool, filter if necessary, pour into the aromatised spirit gradually, and with constant stirring, and add sufficient distilled water to make the product measure 1 pint.

A good deal might be said with reference to the tinctures, and the whole subject requires revision, but I will only now refer to the following two:—

TINCTURA BENZOINI COMPOSITA.—The faulty directions of the 1867 B.P. are left unimproved in the new. The formula orders fully 4½ oz. of solid ingredients, mostly soluble, to be macerated for seven days in 1 pint of rectified spirit, with occasional agitation, then filtered, and sufficient spirit added, if required, to make 1 pint. Following the official directions, the finished product measures 23½ fl. oz., but it is clearly the editors' intention that it should measure only 1 pint. The directions, therefore, should have been, as in the parallel cases of tinctura aloës and tinctura tolutana:—

Rectified spirit A sufficiency

Macerate for seven days (four are sufficient) in 15 fl. oz., &c.

TINCTURA CAPSICI.—This is surely the *reductio ad absurdum* of the familiar though generally unheeded B.P. process of combined maceration and percolation. Just imagine a practical pharmacist transferring whole ¾ oz. of capsicum to a percolator, and from that to a tincture-press? It can be much more conveniently and as efficiently prepared by simple maceration, using the ordinary powdered capsicum of commerce.

UNGUENTUM BELLADONNÆ.—This ointment is much more easily prepared by the following slight modification of the official process:—

Alcoholic extract of belladonna	50 grains
Glycerine and water, of each	15 minims
Benzoated lard	1 oz.

Mix the glycerine and water, and with the mixture rub down the extract to a perfectly smooth paste; then add the lard, and mix thoroughly.

UNGUENTUM CHRYSAROBINI.—The official process does not yield a satisfactory result, 480 grains of benzoated lard being insufficient to dissolve 20 grains of chrysarobin. Consequently, the ointment contains numerous pretty large particles of chrysarobin, and, if the method of stirring till cold be alone adopted, much of what is dissolved will crystallise out. I have found that chrysarobin is pretty freely soluble in hot castor oil, and, as the result of some experiments, I would suggest the following as something like what it should be:—

Chrysarobin	20 grains
White wax	60 "
Castor oil	180 "
Prepared lard	240 "
Tincture of benzoin (1 in 5)	20 minims

Melt the wax in the castor oil, add the tincture of benzoin and chrysarobin, and continue the heat until the latter is dissolved. Place the lard in a mortar, pour in the other ingredients while still hot, mix thoroughly, and continue the rubbing until cold. The result is a yellow homogeneous ointment.

PHARMACY IN INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

MR. CHARLES WAGNER, representing Messrs. Lynch & Co. and other firms, has reached this quarter of the globe on his round-the-world trip. He remains in Bombay until January 1, and then leaves for Kurrachee *en route* for Lahore, Calcutta, Singapore, Hong-Kong, Australia, New Zealand, and San Francisco. He expects to be away from England two years.

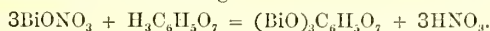
Cases of poisoning by opium continue to occur, and it is probable that not more than one in twenty deaths from this drug are noticed by the police. Sudden deaths are very frequent in India, and secret poisoning is often very probable.

FAREWELL ADDRESS.—A beautifully illuminated and very complimentary valedictory address was presented recently by the employés of Treacher & Co. (Limited) to Mr. E. Rammell on his leaving that firm, in which he had laboured efficiently for some fourteen years. Mr. Tucker is his successor in the management of the business.

BISMUTHI CITRAS, WITH AN IMPROVED FORMULA FOR THE PREPARATION OF LIQUOR BISMUTHI ET AMMONII CITRATIS.*

By PETER MACEWAN, PHARMACEUTICAL CHEMIST.

WHATEVER may be said against the new process for the preparation of liquor bismuthi, no one will deny that it is an honest attempt to get rid of the objectionable features of the old liquor, which was a very different thing from its prototype. Unless in strength, which is still very much over the mark, the formula given under *liquor bismuthi et ammonii citratis* is all right, provided we have a pure citrate to begin with. Therein lies the difficulty, for the official process for the citrate is almost unworkable, and, however modified, does not give a pure ammonia-soluble citrate. I have no personal experience of the commercial citrate, but since the publication of the Pharmacopœia I have had numerous inquiries regarding it. The first inquirer had used a pint of ammonia solution for 800 grains of the citrate, and yet did not obtain a perfect solution: it was milky, and a portion of the citrate was untouched. This complaint has been repeated by others, and some who have tested the citrate report the presence of undecomposed nitrate in it, and so on. Also there have been many complaints against the official process, and it is these which have induced me to make the experiments which are the basis of this note. No doubt manufacturers will see that they send out a pure article, and thus arrest further complaint; but there is a growing tendency amongst retail pharmacists to manufacture odd chemicals. Whether this is the outcome of better chemical knowledge or lack of business I am not prepared to say, though probably both have an influence; be that as it may, the desire to manufacture on the small scale deserves encouragement, and surely the fountain head of this encouragement should be our national Pharmacopœia. But in this case it is not so. The official process for the manufacture of a few ounces of bismuth citrate is the opposite of encouraging. Already Mr. Stephenson has recorded his disappointment, and my results corroborate his to the full. If 11 oz. of nitric acid be used to dissolve the bismuth, water may be added to the solution *ad infinitum* without arriving at the critical point; with 6 oz. of acid from 4 to 5 gallons of water are required, and with less acid the ternitate is apt to crystallise out before water can be added. Mr. Stephenson's objection is alone fatal to the process, but I believe the principle of it to be also bad. The official aim is to bring the bismuth as near as possible to the basic state before adding the alkaline citrate solution. What could be more unreasonable? We require a normal citrate, and try for an oxy-citrate! I have obtained by the process a citrate free from nitrate, yet not wholly ammonia-soluble; and this I take to be due to the presence of oxy-citrate, the reaction between the basic nitrate and citric acid being—



This reaction is only partial, no doubt, but the nature of the process favours it. We have the same error of principle exemplified in Rother's process, now official in the U.S.P. In this process bismuth subnitrate, citric acid, and water are boiled together. Here also, though the subnitrate undergoes complete decomposition, the product is not wholly ammonia-soluble. I have tried repeatedly and cannot get the desired result by this process, and others in whom I have much confidence have had the same experience.

It was expected, owing to the introduction of oxide of bismuth into the 1874 Addenda, that Wood's process would have been adopted, and even Mr. Umney takes the new process as Wood's; but it is not so. In Wood's process bismuth oxide, preferably fresh, is dissolved in a mixture of solution of ammonia and ammonium citrate. This is a distinct advance on the old process, but it has one objection, viz., an excess of ammonium citrate, which we know to be unnecessary. In a paper by M. Mehu (*Phar. Journ. and Trans.* 3, iv. 361) we have a process which is all that can be

desired. M. Mehu dissolves crystallised bismuth ternitrate in a strong solution of citric acid, saturates one half of the mixture with ammonia, then adds the other half of the mixture, when normal bismuth citrate is precipitated. I have had admirable results by this process slightly modified. The citrate is precipitated in a bulky state, and when dried on bibulous paper in a hot-air oven, it is obtained in light and milk-white flakes, and forms with ammonia a bright, almost water-white, solution, there not being a particle of insoluble residue. Mehu brings forward the paper ostensibly for the direct preparation of liquor bismuthi, but, as his paper does not contain other than approximate quantities, I give a formula for a pint of liquor.

Take of—

Subnitrate of bismuth	..	..	..	..	1 oz. 180 grains
Citric acid	..	..	..	..	1 oz. 60 grains
Nitric acid	..	..	..	..	1½ fl. oz.

Solution of ammonia and distilled water, of each a sufficiency.

Heat the subnitrate with the nitric acid until the salt has dissolved and the solution has acquired the appearance of a syrup, with this mix the citric acid previously dissolved in 1 oz. of water by the aid of heat; divide the solution into two equal portions, and to one portion add solution of ammonia until the precipitate at first formed is redissolved; dilute with water to 1 pint, add the remaining portion of the bismuth solution with constant stirring, collect the precipitate on a calico filter, and wash with water until the washings are free from acid. Transfer the precipitate to a suitable vessel, and add solution of ammonia gradually and with constant stirring until the precipitate is just dissolved. Dilute with water to 1 pint.

A competent practical pharmacist has, at my request, tried this formula, and says that it is "an absolute contrast, in its simplicity, to the B.P. method"; but he fears that there is a great loss of bismuth in washing. This I had previously determined to be under 3 per cent., having obtained 97 per cent. of the theoretical yield of citrate. Hence in this formula I give a slight excess of bismuth over what is required for 800 grains of citrate, and, as the B.P. allows 2 per cent. of water in the citrate, the loss in the washings is compensated by these provisions. Citric acid is also in excess. With the theoretical quantity the bismuth is apt to crystallise out before ammonia can be added. On the large scale it will be possible to modify the proportions which I give; thus, for bismuth citrate the quantities might be—bismuth subnitrate, 13 parts; nitric acid, 13 fl. parts; citric acid, 10 parts.

It is obvious that the 1867 process may be modified according to the principles herein involved, and this may, perhaps, be the gentlest way for the Pharmacopœia authorities to recant, when the time arrives.

NOTE.—Since the foregoing was written I have observed that Mr. Proctor, in his "Lectures on Pharmacy," recommends the process. I wonder why it has slipped recognition by the authorities.

PATENT MEDICINES IN AMERICA.

THE *Boston Daily Globe* has made a most elaborate investigation into the extent and character of the Patent Medicine business of the United States, basing these on census returns supplemented by private inquiries. It is considered that there are approximately 5,000 proprietary articles of home manufacture on the United States market. Perhaps 500 of these are of importance. Barely fifty are or can be run as independent business. The proprietary medicine trade of the United States amounts to about \$22,000,000 annually. Of this \$10,000,000 is expended for advertising. The proprietors divide the profits of \$5,000,000 annual return.

The proprietary medicine business, as we know it to-day, is not of very ancient origin. It is rather the growth of the last half-century, and it is certain, as far at least as this country is concerned, that the business as carried on prior to that time was mainly of an unimportant and ephemeral character. Most of our long-established and best-known

* Read before the Edinburgh Chemists' Assistants' and Apprentices' Association.

medicines were first heard of under their present names between 1830 and 1840, though there are a few which are considerably older.

The path of the progress of the proprietary article industry is strewn with the wrecks of the men who made the hard fight, but were unable to keep their heads above water. Not one article in a thousand succeeds even when backed by a generous capital.

Within the present generation perhaps five men or firms in this business in this country have made, to average, say \$1,000,000 each. There may be from ten to twenty others who have made in the aggregate another \$5,000,000. After these we have to look in vain to another \$5,000,000 in the aggregate net savings of all the others in the trade in the country together.

The American public probably buys more "patent medicines" in proportion to their number than any other people in the world. The reason is to be found in the proportionately greater number of the well-to-do middle classes. There can be no doubt that the middle class does buy the major portion of such articles sold. Neither the very rich nor the very poor buy the ready-made medicines to any large extent. To the latter class the door of the free hospital and free dispensary is always open. The former can afford to call upon the physician for the most trifling indisposition.

To get at the profit of the manufacturer, it will be most convenient to consider the dollar article, which is sold to the trade for \$7 per dozen. Here is a trifle over 50 per cent. of the retail price. And generally it may be said that the manufacturer gets about half of what the consumer pays. Striking a broad average, about one-fourth of the manufacturers' receipts go into material and labour. It is estimated that a dollar article will contain 12½ cents' worth of material, labour, and tax. To this has to be added rent, freight, express, clerk hire, and such expenses, which will nearly double the amount, making it at least 24 cents. Last, but not least, the advertising bill has to come out of what remains of the manufacturers' receipts. This is variable, and depends upon the age of the article. If the medicine is comparatively new, it may be a great deal more than the return. If it is an old-established medicine it is at least 12½ cents on the dollar bottle. This leaves 12½ cents out of the dollar as the manufacturers' profit. Somebody else has got the rest. The jobber buys at \$7, and gets his fifteen off. It costs him 6 per cent. to do his business. He therefore makes 9 per cent. on the transaction. The retailer is supposed to make 35 per cent. on each sale. The consumer's dollar paid for an established medicine is therefore found to dividend up in this way:

Expenses.

	Cents
Cost of material, labour, and expense.. ..	24
Advertising.. ..	12½
Jobbers' expenses.. ..	03½
Retailers' expenses	21
Total expenses	61

Profits.

Manufacturers' profit	12½
Jobbers' profit	05½
Retailers' profit	21
Total profits	39
Total	\$1 00

Many of the smaller country newspapers subsist almost entirely on the revenue derived from this source. In the last twenty years proprietary medicine advertisements have paid the newspapers of the United States fully \$100,000,000, a sum many times greater than the proprietors themselves have saved during the same period.

The newspapers, of course, get the major part of the advertising patronage, but there are many other mediums. Many of these were exceedingly remunerative while they were a novelty, but most of them have been so largely employed that they have ceased to be attractive. It is estimated that upwards of \$5,000,000 dollars has been expended in painting the rocks and fences of the country. A Massachusetts firm (Ayer) began the issuing of almanacs as a method of advertising many years ago, and for a while had

the field substantially to itself, but it is now a common expedient.

As for the possibilities for new remedies, the field is very much narrower to-day than formerly. Many articles have not succeeded for the simple reason that there were already too many articles in the same line in the market. It would be very difficult to make a new cathartic pill succeed, because there are sixty already in the field. It would be difficult to make a new sarsaparilla succeed, because there are half a dozen or more in popular use. The same may be said generally of plasters and ointments.

The Federal Government enforced on patent medicines for a long series of years a stamp tax. The tax was also laid on cosmetics and perfumery, and thus reached all goods of a proprietary nature. The tax was assessed upon the nominal retail price, and was supposed to be 4 per cent. of that price; but it is easy to see, in view of what has been said, that it was fully 10 per cent. on the manufacturer's price.

Unfortunately, it is not possible to obtain the figures for the proprietary medicines alone, for since the establishment of the tax the revenue from all adhesive stamps is aggregated on the books; but from the report of the commissioner at Washington, we find the revenue on cosmetics, perfumery, and patent medicines during the designated years was as follows:—

1880	\$1,836,673.22
1881	1,843,263.90
1882	1,978,395.56
1883	2,180,036.16

Careful estimates show the proportion of the tax paid by the proprietary medicines alone to amount to about \$1,800,000 a year. This stamp tax has been abolished.

The foreign trade in American proprietary medicines might well be made more extensive than it is. There is no doubt that the tax on alcohol has been largely at fault in preventing this trade from assuming its natural proportions. The rebate provided for at the custom house is practically inoperative and unavailable. Still there is already a considerable field abroad which is being covered with American remedies. Twenty years ago there were only three American medicines of any repute being sold for actual use in England, but since 1875 the trade has very largely increased, so that to-day there are at the least calculation twenty-five American articles which have an extensive sale in that country. Since the Canadian Government has been very stringent in the matter of duties on proprietary medicines, proprietors have established, and are still establishing, branch manufactories in Canada, where they put up their goods, and thus avoid the duty entirely. If this will be found to pay in Canada it will be found to pay elsewhere. The very large field in this country has often taken so much of a manufacturer's time and attention that he has not had the disposition to turn his thoughts to the other lands which still remain to be conquered.

As for the commercial depression of the last two years, it has not affected the proprietary medicine business adversely in the least. If it has any tendency at all in this matter, "hard times" tends rather to increase than diminish the sale of proprietary medicines, for it enforces a closer attempt of economy among the people than that which ordinarily prevails. So it is that the business has steadily increased since the beginning.

Figures, obtained in advance of their publication from the United States Census office, show that in 1880-81 there were 563 patent establishments in the country, employing 4,015 operatives, that \$10,620,000 were invested in the business, and that the value of the annual product was \$14,682,000. In the amount of capital invested New York stands first with \$3,512,430. The only other States which have more than \$1,000,000 in the business are Pennsylvania and Missouri, the first of which has over two millions, and the second nearly a million and a half. Ohio comes next with \$570,000, and Massachusetts ranks fifth with \$521,000. In the amount of annual product the above order is very different. New York still stands first, her product being nearly four millions and a half. Massachusetts ranks second, making nearly a million and a half, while Pennsylvania makes but a little more than a million. No other State produces more than a million.

THE SOURCES OF THE ALTERATIONS, INTRODUCTIONS, &c., IN THE BRITISH PHARMACOPEIA OF 1885.

WHEN the editors of the medical and pharmaceutical periodicals had the privilege of viewing advance copies of the—what was to become on September 1, 1885—new official guide for the British medical man and pharmacist, several of them, when commenting generally on it, said that, although many changes had been effected in the work, yet not many would be called new, since they had been foreshadowed or had actually appeared in the literature which had been written since its predecessor of 1867 and the additions of 1874. On examining the Pharmacopœia, it will be seen that the statement then made is not far from the truth; and that, although pharmacists have not been officially engaged in the compilation, yet they have certainly done the most to bring about the alterations, additions, omissions, and amendments, as the following notes are intended to show:—

LIQ. BISMUTHI, as now prepared, was suggested by Mr. C. H. Wood (Year-book of Pharmacy, 1871, page 614). It resembles more closely the original preparation as devised by Mr. G. F. Schacht, of Clifton. It will be found to need a little spirit to preserve it.

SP. AM. AROMAT. was devised by Dr. Thresh, and will be found printed in the pharmaceutical journals about the month of February, 1883. It may be noted that an error with regard to sp. gr. found its way into the Pharmacopœia through the clerical error of the author of the process. The test for alkalinity and amount of carbonate is also based upon this gentleman's experiments.

SYRUP. FERRI PHOSPHATIS.—To be prepared still by precipitation of the ferrous phosphate, but using, in the place of the acetate of sodium to eliminate free sulphuric acid, a little bicarbonate of sodium, at the suggestion of Mr. Howie, August 8, 1876 (*vide THE CHEMIST AND DRUGGIST* for 1876).

THE OLEATES are variously ascribed, but Attfield (1863) probably first suggested them, then Dr. John Marshall, and subsequently numerous others.

CHLORODYNE.—From a formula published by Mr. Squire in one of the earlier editions of his "Companion to the Pharmacopœia." We find, however, that the quantity of morphia has been increased somewhat.

EXTRACT. RHAMNI FRANGULÆ.—This formula, *verbatim et literatim*, is taken from a paper by Mr. Umney, July 11, 1874 (Year-book of Pharmacy, 1875, page 277).

EXT. SARSÆ LIQUIDUM.—Proposed by Mr. Barton, and transcribed in almost exact words from his paper published in 1874, the only difference being the use of 5 oz. of sugar in place of his quantity of 8 oz.

ALKALOIDAL TERMINATION.—Adopted in conformity with a suggestion sent forth to the abstractors on the staff of the Journal of the Chemical Society, 1883.

BISMUTHUM PURIFICATUM.—The present method, based upon one devised by Hugo Tamm (*Chemical News*, vol. 25, page 100), was probably suggested to the editors by Mr. Smith's paper (Year-book of Pharmacy, 1872), and by Mr. A. E. Robinson. The last-named gentleman also was able to say that from experience it was thoroughly reliable.

ÆTHER PURUS.—The iodide test was suggested very recently (January 3, 1885) by Dr. Warden, and is supposed to detect some unknown but objectionable impurity, which the author thinks is very possibly due to the presence of aldehyd in the ether.

VINUM IPEAC.—A suggestion comprehended in a paper read by Mr. J. B. Barnes before the Pharmaceutical Conference held at Swansea in 1880. The process is inserted in its unaltered form.

ANTIMONIUM SULPHURATUM.—Altered to present formula at the suggestion of Mr. J. Moss. The test for this substance, viz., with nitric acid, is due to Dr. Tilden, who mentions it in a series of notes which he wrote some years ago under the title of "Chemical Notes for Students."

EMP. RAD. BELLAD.—Some years ago (Year-book of Pharmacy, 1870) this was first brought forward by Mr.

Balmer, who said "that it adhered nicely, required no adhesive margin, and never runs, exudes, nor stains linen."

CERA FLAVA.—Mr. Davies called attention to the fact that alcohol dissolves from pure and genuine wax less than 3 per cent. of legitimate constituents (2·3 per cent.).

TINCT. FERRI ACET.—This marked improvement seems to have been foreshadowed by a note in the Year-book of Pharmacy, 1870, page 61. The author's name is not attached, but the late Mr. Deane, of Clapham, and also Mr. Jeaffreson, suggested the process of dissolving the recently-precipitated oxide in glacial acid, and diluting with spirit when required.

LINIM. SAPONIS.—The temperature of 70° Fahr., although not altered in this particular in the present formula, was also a suggestion of Mr. Deane. "At this temperature the spirit took up the oleate, and left the stearate and palmitate of sodium behind."

LIN. POTASSII IODID. C. SAPONE owes its place in the British Pharmacopœia to Dr. Rumsey, of Cheltenham, at which place it had been used for twenty years previous to 1870. The formula was copied from the *Pharmaceutical Journal* of twenty-five to thirty years ago, with a German origin; it was then prescribed with a large quantity of spirit; the water process was, however, adopted. Mr. N. Smith (*Ph. Journ.*, vol. xi., page 543) suggested a formula which appears in the 1885 Pharmacopœia, almost *verbatim et literatim*, even to mode of procedure.

MUCILAGO TRAGAC.—The addition of spirit was first suggested by Martindale (Year-book of Pharmacy, 1874, page 46). Will this small quantity added to the preparation cause it to turn sour rapidly, as suggested in several other preparations? (See Attfield's reply, under "Aq. Camph.")

SYRUP. FERRI IODIDI.—Mr. Carteighe suggested the heating of the syrup before adding the filtered liquor. Although this has been adopted, Professor Redwood then thought, if with pure sugar and in strict accordance with official directions, it would keep any reasonable length of time. Mr. Umney, in the Year-book of Pharmacy, 1873, pointed out that, in order to bring this syrup up to the correct gravity, the product should weigh 2 lbs. 11½ oz. If not, then the gravity is 1·400, and results in the deposition of crystals of sugar. The British Pharmacopœia method seems to be an adaptation of one suggested by Mr. Hamner in a paper in the *Pharmacist* of April, 1876, and abstracted in the Year-book of Pharmacy, 1876, p. 288, the object being to convert some of the cane sugar into grape sugar—a change which, if not thus brought about at the first, does take place in time, and in many cases with liberation of iodine, deposition of oxide of iron, and formation of a coloured, unsightly preparation.

POTASSA SULPHURATA.—Dr. John Watts, in 1867, showed that this preparation did not dissolve in the proportion of three-quarters of its weight in s.v.r., and said that, if 50 per cent. dissolved, it may fairly be considered a good preparation. This has been adopted as the standard of solubility.

ACETUM CANTHARIDES.—On Professor Tichborne's authority the cantharides are ordered to be bruised (*Pharmaceutical Journal* (3) vol. i, p. 501. This gentleman also suggested a blistering collodion consisting of ½ oz., or q.s., gun-cotton to 1 pint blistering liquor (*Pharmaceutical Journal* (2), vol. iii., page 506.)

ACID. HYDROBROM. DIL.—The strength and sp. gr. are based upon the evidence of Dr. C. R. A. Wright (*Chemical News*, xxiii., 242); the method, adapted from the one proposed by Mr. Fletcher for making a concentrated preparation.

INFUSIONS.—The time for the preparation of these has been reduced, on the strength of very careful experiments made by Mr. J. B. Barnes, which are recorded in the *Pharmaceutical Journal* (3), i., 368, in which he showed that the amount of solid matter dissolved out and sp. gr. of liquid were almost identical when infused half the prescribed time. Cinchona, however, which Mr. Barnes macerated with water for only half an hour, now contains a little acid, and is allowed to stand one hour in place of two, as formerly.

AQ. LAURCERASI.—Its great uncertainty with regard to amount of HCy present led Draper to suggest the standardisation, which, as recently pointed out by Dr. De Vrij (*THE CHEMIST AND DRUGGIST*, 1885), then remains fairly constant. This proportion is suggested by A. Ripping, *Arch. der Ph.*, December, 1876.

TINCT. KINO is very much like a formula suggested by J. W. Wood (*American Journal of Pharmacy*, xliii., 344), to prevent the tendency, which this tincture, as formerly prepared had, of passing into a gelatinous condition (Year-book of Pharmacy, 1872).

LIQ. SODÆ CHLORATÆ.—In a paper read before one of the Society's evening meetings (*Pharmaceutical Journal* (3), iii., 403), Mr. Umney suggested this double decomposition process, which was the one used in the Dublin and French Pharmacopœias. The formula he then adapted is now official, even to sp. gr. and % of per cent. of chlorine.

TINCTURA QUININÆ.—The use of the hydrochlorate in this preparation was first suggested by Mr. Whitfield, in a letter to the *Pharmaceutical Journal*, Nov. 24, 1877, and subsequently by Martindale (1878), and, more recently, Mr. Wright (1884) and others.

SYRUPUS MORI is another contribution by Mr. Umney, as is also the addition of the sp. gr. of the succus mori, 1.066. It will be noticed that the quantity of sugar is slightly increased to bring the sp. gr. to 1.330 instead of 1.298.

FERRI ET AMM. CIT.—Acting on the advice of Mr. Umney, the quantity of liq. ferri persulph. was increased in order to saturate the amount of citric acid used with ferric oxide at a temperature of the water-bath, with the result that the ferric oxide obtainable by incineration is now 30 per cent. in place of 27 per cent.

LIN. BELLAD.—Mr. Umney, again, suggested a reduced quantity of root to the same volume of spirit—viz., 10 oz. in place of 20, and to collect 20 oz. of liniment (Year-book of Pharmacy, 1875). This suggestion has been met half-way—viz., 20 oz. of root to yield 30 fl. oz.

EMP. PLUMBI.—Also a child of Mr. Umney, who showed that the B.P. preparation of 1867 contained free olive oil, which, being prone to rancify, did not tend to improve the result. The oxide was, therefore, increased. The authorities, however, still recommend the use of powdered litharge and the use of water, whereas the scales do quite as well in the absence of any moisture at all.

EXT. ERGOTÆ LIQUID.—The uselessness of ether was pointed out by Umney, Squire, Gerrard, and numerous other pharmacists; the last named also recommended increased quantity of water and less spirit (Year-book of Pharmacy, 1875).

LIN. TEREB. ACET.—Mr. W. H. Symons presented a paper to the Pharmaceutical Conference, in which he showed by the use of glacial acetic acid a miscible preparation is secured. His formula, published in the Year-book of Pharmacy, 1876, finds a place in the Pharmacopœia of 1885 in its entirety.

LITHI CITRAS.—We must again place to the credit of Mr. Umney the formula for the production of a salt which is now of uniform composition, and crystalline. He, with Squire, first showed that it was not deliquescent.

ACETUM SCILLÆ.—Mr. E. Gregory showed that the addition of spirit to this preparation was "worse than useless" (*Canadian Pharmaceutical Journal*, October, 1875, p. 77). It is therefore now without spirit.

EXT. PAREIRÆ LIQ.—A solid aqueous extract prepared, and this dissolved in spirit, was proposed by Mr. Barnard S. Procter (Year-book of Pharmacy, 1876, p. 491).

EXT. OPII AND EXT. OPII LIQ.—These were shown by Mr. D. B. Dott to yield, when properly prepared, 20 per cent. and 1 per cent. morphine respectively (Year-book of Pharmacy, 1876).

LIQ. FERRI PERCHLOR.—The altered mode of oxidising the ferrous solution was suggested by E. B. Shuttleworth, *Ph. Journ.* (3) vol. ix., page 859. The test for arsenic is Reinsch's; and this was probably inserted because of the attention drawn to this impurity by Giles, and more recently by Fletcher (1880).

PODOPHYLLIN RESIN.—J. U. Lloyd and other American pharmacists showed that muriatic acid produced an alteration in this resin which affected its colour, and did not add anything to the resulting resin from the tincture. It is therefore now omitted (Year-book of Pharmacy, 1882). The tincture of the resin was introduced by Mr. Postans.

INF. CINCH. RUBRÆ.—The use of acid probably based upon a similar preparation contained in *New Remedies*, April, 1882, in which formula muriatic acid was recommended. This formula was one of the selections from the non-official Formulary of the Dutch Society for the Advancement of Pharmacy.

CONF. SULPHURIS.—On the recommendation of P. Boa, (1882) an addition of 18 grains of pulv. trag. to the British Pharmacopœia proportion of ingredients was made.

ASSAY OF OPIUM.—The original process, of which the United States Pharmacopœia, 1880, and British Pharmacopœia, 1885, are modifications, was devised by MM. Portes and Langlois, who published it in the *Journal de Pharmacie et de Chimie*, November, 1881 (*see Chemical News*, xlv., 67). It was adopted as the official method by the Soc. de Pharm. de Paris, but without the saturation process described at the end of the paper. Mr. Conroy's modification is better than all the formulae which have appeared since the original one was published. The process devised by Prollius, *Ph. Centralhalle* 20, (1878), from *Schweig Woehenschr für Pharm.*, is the first in which alkali, ether, and spirit are suggested. It is generally held to be a good process when carefully performed.

CALX SULPHURATA.—The formula even to the quantities prescribed, is taken from *New Remedies* of May, 1883, where we are also told a similar formula has been in use a long time in medicine, and has been official in various Pharmacopœias. Mr. Dymond showed that the best results were obtained by the deoxidation of calcic sulphate by charcoal.

NUX VOMICA PREPARATIONS.—The extract and tincture are now to be of a definite strength as regards alkaloidal content, at the suggestion of Messrs. Dunstan & Short. The process both for the preparation of extract and tincture, as also the assay method, are the result of the laborious investigations undertaken by these gentlemen.

LINSEED MEAL, as now ordered, is the suggestion of Mr. Thomas Greenish, who read a paper on "Further Contributions to the Pharmacy of Linseed," before the Pharmaceutical Conference of 1884, at Hastings.

EXT. CINCHONÆ LIQUIDUM.—This process appeared in a slightly altered form, first published as a paper and read at an evening meeting of the Pharmaceutical Society, December, 1884, by Prof. Redwood.

LARD.—The process for producing that for pharmaceutical use has been altered on the strength of numerous opinions, including Prof. Redwood's own data, published in the *Pharmaceutical Journal* (3), xiv., 364.

SWEET NITRE ASSAY.—A. H. Allen's process, founded upon one suggested by Mr. Dott, is now authorised. An alternative process alluded to is after one by Eykman, of Tokio; but this requires more elaborate apparatus than the first named. The fact of the deterioration of this preparation is now officially recognised, after the repeated statements by numerous thoroughly reliable observers.

PEPSINE TEST.—The use of divided albumen and the increased temperature of 150° Fahr. are the suggestions of Mr. Bengier.

RHAMNUS FRANGULA.—The bark of this plant was introduced to the British medical profession by Mr. H. C. Baildon, of Edinburgh, who received a supply from Holland (1871), where it was said to be used as a gentle cathartic by the Dutch physicians. A decoction was then suggested. Dr. Lamm first found that when the fresh bark was used it did not possess its true purgative property; according to Fristedt it produced colic and vomiting. When kept three to four years he found its purgative properties were developed in a more marked degree. The Norwegian Pharmacopœia requires the bark to be kept one year before use.

ACID. NITRO-HYDROCH. DIL.—The new mode of preparation is founded upon the researches of Dr. Tilden, of Birmingham.

CALCIC HYDRATE.—Mr. A. C. Abraham suggested the washing of this substance in order to remove chlorides and sulphates before being used for the preparation of lime-water, liquor potassæ, and liquor sodæ.

LIQ. MAGNESII CARBONATIS AND ACID. SULPHUROSUM.—Both reduced to more reasonable strengths as a result of Mr. Umney's criticisms and suggestions.

TINCT. CINNAMOMI.—The use of rectified spirit was suggested in the preparation of this by Mr. Greenish, and also Mr. Haseldon.

CHEMICAL NOMENCLATURE.—The suggestions of Dr. Attfield, which are embodied in a lengthy paper read before the Pharmaceutical Conference (*vide* Year-book, 1871).

UNIFORM DISINTEGRATION OF DRUGS.—Mr. Allchin seems to have advocated this very desirable addition, but of course, not he alone, as will be seen on reference to the numerous papers scattered throughout the periodicals devoted to science.

ELATERIUM TEST as to quantity of elaterin which should be present is the same as mentioned in Hanbury and Fluckiger's "Pharmacographia," and has but very recently been shown to be faulty.

LIQUOR FERRI DIALYSATUS.—The percentage of ferric oxide and sp. gr. (corrected) of this preparation probably adopted after a perusal of a paper on the subject by Mr. Braithwaite a few months before the appearance of the B.P., 1885.

QUININE SULPHAS.—The tests under this head are based upon the investigations of Dr. B. H. Paul.

TABELLE NITROGLYCERINI.—The mode of exhibition of this dangerous remedy is ascribed to Mr. Martindale.

LAMELLE.—First introduced by the representatives of the firm of Savory & Moore. Of the 114 new introductions (drugs, &c.), it may be noted that at least 63 are official in the U.S.P., 1880, and have been much used in British medicine for a long time; it is notorious that our American Pharmaceutical friends take an active part in the compilation of their national Pharmacopœia, and not only so, but (as was the case before the appearance of the 1880 edition) send advance proof-sheets to eminent foreign pharmacists for inspection and criticism. It is to be hoped that, as Britons get more liberal, British pharmacists may receive officially and publicly the "honour to whom honour" and credit to whom credit.

SCIENTIFIC FESTIVITY.

OF late years it has struck me, with constantly-increasing force, that those who have toiled for the advancement of science are in a fair way of being overwhelmed by the realisation of their wishes. We are in the case of Tarpeia, who opened the gates of the Roman citadel to the Sabines, and was crushed under the weight of the reward bestowed upon her. It has become impossible for any man to keep pace with the progress of the whole of any important branch of science. If he were to attempt to do so his mental faculties would be crushed by the multitudes of journals and of voluminous monographs which a too fertile press casts upon him. This was not the case in my young days. A diligent reader might then keep fairly informed of all that was going on, without robbing himself of leisure for original work, and without demoralising his faculties by the accumulation of unassimilated information. It looks as if the scientific, like other, revolutions meant to devour its own children; as if the growth of science tended to overwhelm its votaries; as if the man of science of the future were condemned to diminish into a narrower and narrower specialist as time goes on.

I am happy to say that I do not think any such catastrophe a necessary consequence of the growth of science; but I do think it is a tendency to be feared, and an evil to be most carefully provided against. The man who works away at one corner of nature, shutting his eyes to all the rest, diminishes his chances of seeing what is to be seen in that corner; for, as I need hardly remind my present hearers, that which the investigator perceives depends much more on that which lies behind his sense-organs than on the object in front of them.

It appears to me that the only defence against this tendency to the degeneration of scientific workers lies in the organisation and extension of scientific education in such a manner as to secure breadth of culture without superficiality; and, on the other hand, depth and precision of knowledge without narrowness.—*From Professor Huxley's Presidential Address to the Royal Society, November 30, 1885.*

AILMENTS AND REMEDIES AT SEA.

BY A SHIP'S DISPENSER.

AFTER putting out to sea one of our first troubles is, of course, sea-sickness, and the young surgeon, perchance himself a victim, will frequently be at his wits' end to know how to combat the many forms sea-sickness assumes. The only weapons the Board of Trade supply to meet this foe of landlubbers are chloroform and ether. We have generally found that 10 minims of chloroform in $\frac{1}{2}$ oz. of brandy will both prevent and cure this cruel tax which Neptune imposes. Ether seems to act better during a paroxysm in $\frac{1}{2}$ -drachm doses given in brandy or as Hoffman's anodyne. Apomorphia in doses of 1-32 of a grain every half-hour cured the writer during a heavy sea in the Bay of Biscay, and any emetic taken in small doses frequently and perseveringly will bring relief. But our sheet anchors are the bromides, which unfortunately are not included in the official medical list. A little of both the bromides of ammonium and potassium is often obtained before sailing. In cases of extreme nervousness and debility with sea-sickness 20 grains of potassium bromide with 20 minims of chloric ether and a little sal volatile forms a good draught every three or four hours until relieved, keeping the patient quiet and recumbent.

The supply of aperient medicine should be large. It generally proves that, however great precautions are taken to have sufficient, we invariably run short. The cathartic mixture of senna of the Pharmacopœia is, in our experience, the best and most reliable for the crew, and the stronger portion of the community, preceded, if necessary, by a 3-grain dose of calomel or blue pill when indicated by a sluggish and drowsy patient. Good quality and quantity of castor oil for children is essential, and we make a practice of giving each mother a 2-oz. phial of this infantile panacea, and prescribe it on our rounds when necessary. Mothers, however, are frequently too weak, and bring their little ones for us to dose, which we do by holding the child's nostrils until the medicine is swallowed. By the way, they generally take a second dose more readily.

The pill of colocynth and henbane is a nice pill for females as is also the compound rhubarb pill, but these are very sparingly supplied by shippers. The necessarily indolent life led on shipboard by the feminine, especially the spinster, portion of the community seems to render them capable of consuming black draught *ad libitum*, which one matron facetiously styles port wine, and serves out, as did Mrs. Squeers, daily to all comers. Hysteria, as a rule consequent upon the irregularity of the female function, is very prevalent, and would appear infectious, notwithstanding the nauseousness of the bromides and the ammoniated valerian tincture, which with a copious douche of cold water is the usual treatment. Of the aloes and myrrh pill, so useful in amenorrhœa, we only get about three dozen, which are of little use on board a large ship.

We all eat too much at sea and take too little exercise, and as a result suffer from indigestion, or it may be that salt beef and pork, together with pea soup and other ship delicacies, disagree with the average Englishman. Be this as it may, the only likely medicine the ship has is Gregory's powder, which is exceedingly bulky and unpleasant to take. We prefer the dilute hydrochloric acid with a bitter infusion, which, taken after food, seems to aid the stomach in digesting salt junk. Now in the Board of Trade scale we get neither the dilute acids nor the bitter infusions. On one voyage we took the gentian root and made about a quart of the infusion, and it served as a capital tonic and vehicle for this class of medicine.

On the other hand, diarrhœa is a sore trouble, and at times almost assumes the form of an epidemic, and on account of the extreme difficulty of properly dieting one's patient is sometimes very persistent. A full dose of castor oil in brandy, followed by chlorodyne if necessary, has proved wonderfully efficacious, the complaint arising as a rule from some error in feeding. When traceable to the water an astringent mixture of dilute sulphuric acid with opium is advisable. With children a drachm of the rhubarb tincture followed by the decoction of logwood in appropriate doses has proved eminently serviceable. These latter will not be found in the ordinary ship's medicine chest.

We usually find aboard a large quantity of an astringent

powder, which is, we think, a mixture of equal parts of compound catechu powder and opiate confection, of which we rarely use much, although in many cases it has proved efficacious. With children vomiting is commonly concomitant, and lime water is almost a necessity, yet with some hundreds of children about $\frac{1}{2}$ a gallon of this water is supplied. After some difficulty one finds some lime far down amongst the ship's stores, and the best plan is to make the saccharated solution and give from 10 to 60 drops with each portion of milk or other suitable food.

One is frequently called up to see a patient, and finds a pulse of, say, 140 and a temperature of 104, arising mayhap from injudicious clothing or tropical heat and the night dews. Now in an ordinary ship's chest no aconite or anything to take its place is to be found, and if one forgets to order before embarking the dilemma is extreme. Even a Mrs. Gamp, with all her contempt for draughts, "salidge" or otherwise, could not get over this. Of course, we have the spirit of nitrous ether and ammonia, but our never-failing aconite should undoubtedly be amongst a ship's requisites. A minim or more every hour will give our patient relief, bring down his temperature and pulse, and make altogether a satisfactory convalescence.

Of sedatives we have only the tincture of opium and a small quantity of digitalis, which latter is soon gone should we get one or two cases, as is likely, of heart disease.

Again, say we wean a child or two, and as a consequence the mothers' breasts become exceedingly hard and painful, where is our belladonna? Certainly it would not be aboard had we not ordered it specially. In this case we have used a mixture of vaseline with the solution of atropia, which fortunately turned up in scant quantity. The extract of belladonna should be added to the Board of Trade seals, as not only is it useful in these cases, but also in habitual constipation, and many other forms of disease which crop up at sea.

In cases of night sweating in phthisis $1\frac{1}{2}$ minims of the solution of atropia ($\frac{1}{10}$ of a grain) with a few minims of dilute sulphuric acid, given at bedtime, will totally check this weakening, distressing symptom.

Coughs, colds, hoarseness, and loss of voice are exceedingly common in ship-life, and the supply of medicines is generally very inadequate. We make a large stock bottle of mixture, and in doing so use all the squill tincture and the compound eamphor tincture, and afterwards must wait for the first stopping place to recoup. Again, in making a cough mixture for children we miss the syrups of squill and tolu, which are rarely seen at sea. For hoarseness and loss of voice the cold water compress of lint and oiled silk is very useful, and, if necessary, a stimulating liniment to the affected parts. Ammonia, except as the aromatic spirit, is absent.

Neuralgia, we find, at sea gives in to a full dose of quinine, say 10 grains, preceded by an aperient draught, but it is sometimes, especially in the tropics, accompanied by photophobia, when we make an eye-glass, say of an ounce pill-box, blackened inside and a very small opening. This, as a rule, gives relief.

The means at our command for fumigation, disinfection, and isolation are very inadequate. Sulphur, which to be of any use, should be burnt freely in the closed compartments, is represented by a 7-lb. tin, whereas a hundredweight should be sent for a large crowd on a two months' voyage. Carbolic acid in solution and as a powder is amply provided, and we use it freely where needed, having wetted sheets before all hospitals with infectious cases, but for closets we find chlorinated lime the best purifier and deodoriser, and this is not sent in sufficient quantity where there are nearly a thousand souls on board. Burnett's fluid we do not place much reliance upon, for though it may destroy the noxious matter in a ship's hold, the absence of any disinfecting vapour from it makes it almost useless for closets and the like. Condy's fluid is very useful in the hospitals, but is sent in small quantity.

I have only touched upon a few of the ailments occurring amongst those who go down to the sea in ships, yet I think I have said enough to show that the remedies supplied are inadequate to meet them, and would propose that where a ship carries a surgeon he should be allowed to choose what medicines he pleases in quantity and quality. I may add that I have made four voyages to Australia in large emigrant steamers as dispenser.

CHEMICAL SOCIETY.

December 17, 1885.

"On the Use of Ferrous Sulphate in Agriculture." By A. B. Griffiths, Ph.D.

Wheat crops have been grown during the past season by the author with and without the addition of iron sulphate to the land ($\frac{1}{2}$ ewt. to the acre). The crop grown with iron sulphate yielded $32\frac{1}{2}$ bushels of grain, while that grown without yielded 30 bushels; hence it appears that iron sulphate is not such a good manure for cereals as for root and leguminous crops. On the other hand, a Mr. Edgson, of Eton, near Peterborough, has used iron sulphate with considerable benefit for wheat crops this year. It is stated that iron sulphate used as a top-dressing to grass-land destroys moss, and that the ashes of the dead moss contained 11.56 per cent. of iron oxide. The grass, on the other hand, grew well after the treatment, and the amount of ferrie oxide in its ashes was only 2.46 per cent. It is also stated that a solution containing 0.1 gramme of iron sulphate in 100 grammes of water destroys *Peronospora infestans* and its spores; also the "wheat-mildew" and its spores.

In a series of experiments with potatoes, three plots of land of the same size were manured—B with iron sulphate and artificial manures, C with the artificial manure alone, and plot A was left normal. B gave a yield of $8\frac{1}{2}$ tons of tubers, C, $6\frac{1}{2}$ tons, and A only 3 tons.

The best way to apply the sulphate to the land is as a top-dressing, the quantity being $\frac{1}{2}$ ewt. to the acre.

"On Phenyltribromomethane, $C_6H_5.CBr_3$." By Walter H. Ince.

The author describes a method of preparing this compound by adding bromine to boiling toluene in a specially constructed apparatus in which the use of corks and caoutchouc is avoided; he has also prepared it by passing the vapour of toluene into a flask filled with bromine vapour. It is a colourless, mobile liquid, soluble in alcohol, ether, benzene, and toluene; when heated above about 150° it decomposes, and cannot, therefore, be purified by distillation. It slowly decomposes on exposure to sunlight. Its vapour has a perfectly overpowering action on the eyes and mucous membranes. When heated with water it readily forms benzoic acid; but it is very slightly acted upon even after prolonged boiling with alcohol.

FRENCH PHARMACEUTICAL NEWS.

PHARMACEUTICAL LEGISLATION.

In the last French Parliament several new pharmacy laws were submitted, all of which were summarised in this journal. The last, M. Naquet's project, based on the report of a committee, was generally approved; but it did not become law before the expiration of the Parliament, and consequently all the preliminary steps were lost. A very similar project has been introduced into the new Parliament under the sanction of the following deputies, M. Naquet being now a senator:—MM. C. Duval, Dueros, Folliet, J. Phillippe, Ferrary, Poehon, P. Blane, Pradon, and Horteur. Explanatory of the Bill a lengthy proposition is published on the authority of the deputies named, from which we take some of the characteristic passages:—

Everyone knows the progress which science has made in the professions based on scientific bases. No professions have contributed more largely to this progress than those of medicine and pharmacy. The latter is still bound and cramped by the legislation of another age.

Too long have the apothecary, and after him the pharmacien, been regarded as mere sellers of drugs. It is forgotten that the learned and laborious men who practise this profession can only acquire a right to do so after long, patient studies, touching all the sciences from the simplest galenical manipulation to the most minute researches of micrography.

At every instant the pharmacien renders useful services to his fellow-citizens, especially in districts far from the large cities. Chemistry and analysis are his domain; he is frequently consulted on legal and sanitary questions, and his work in regard to foods is daily becoming more important.

If he did not keep an open shop his position would be better understood. He is first of all a man of science; for him commerce is only an accessory; but his commerce is of such a nature as to exact the most scrupulous probity.

It is equitable, therefore, that the practice of this profession should be established on firm bases, and the proposition which we have the honour to submit to you, and which has received the approval of a great majority of French pharmacists, though it does not absolutely fulfil all their hopes, will give to them legislation more in conformity with modern ideas; and if we have the good fortune to see our project adopted by Parliament we shall consider that we have rendered an important service to a worthy profession.

BAUDRIMONT'S SUCCESSOR.—M. Prunier, who for some time has been a professor of analytical chemistry at the Paris School of Pharmacy, has just been appointed Professor of pharmaceutical chemistry, in place of the late M. Baudrimont. The lectures only commence with the second half-yearly term, that is, some time in April.

DEATH OF DR. TULASNE.—The well-known botanist, Louis René Tulasne, aged seventy, died at Hyères, on December 22, 1885. He was the tenth member whom the French Academy of Sciences lost that year. His works on mushrooms and lichens are justly celebrated.

DEATH OF DR. DECHAMBRE.—Amédée Dechambre, a member of the Academy of Medicine, died, aged seventy-four, at his residence in Paris, on January 3. His life was chiefly occupied with medical literature. He was the chairman of the Editing Committee of the *Gazette Hebdomadaire*, and the director of the *Dictionnaire Encyclopédique des Sciences Médicales*. His encyclopædia is a very large and important work, which treats not only of medicine proper, but also of allied sciences, like pharmacy, chemistry, physics, &c., and has now reached its eightieth volume.

THE NEW ENGLISH CORRESPONDING MEMBER OF THE ACADEMY OF SCIENCES.—At a recent meeting the Academy elected M. Hayem to full membership, and selected Sir Joseph Fayrer, of London, as a foreign correspondent. The number of both members and correspondents is strictly limited.

PONTIFICAL DISTINCTION.—M. J. Louis Cazac, late of the Toulouse School of Medicine and Pharmacy, who is chiefly known for his pharmaceutical researches, has just received from His Holiness the cross of the pontifical order of St. Gregorius the Great.

ENFORCING THE PHARMACY LAW AGAINST MOUNTED BANKS.—The Pharmaceutical Syndicate of St.-Etienne, near Lyons, recently prosecuted a noted charlatan, named Casagrande, who was in the habit of standing in market-places, on a coach with six horses, and pulling teeth, vending remedies, &c. A fine of 500f. and costs was the sentence.

A CHEMICAL EXHIBITION IN PARIS.—The Paris Chemical Society announces an exhibition of chemicals, and chemical apparatus, both industrial and scientific, which is to be held under its auspices during the coming Easter week at the conservatory of the *Arts et Métiers*. Foreign chemists, and more especially the English, are invited to participate, as exhibitors as well as visitors. During the exhibition a series of lectures will be delivered by Prof. Raoult, of Grenoble, with the aid of the unrivalled appliances and personnel of the Conservatory. Further particulars may be obtained from Prof. Oechsner de Coninck, 121 rue de Rennes, Paris. The genial professor is a son-in-law of the late Prof. Wurtz.

THE PARIS PHARMACEUTICAL SOCIETY.—At their last meeting, held on January 6, the Association granted 150f., that is one-half of the Dubail prize, to M. Arnouvin, for his thesis on the "Analysis of the Syrups prepared from Fluid Extracts." They also installed their newly-elected officers, namely, Messrs. Prunier, president; Desnoix, vice-president; Portes, annual secretary; Dreyer, treasurer. Prof. Planchon remains the perpetual secretary. M. Portes is the *Pharmacien* of the Lourcine Hospital.

A FEW MORE STATUES FOR PARIS.—The epidemic of statuary is still raging unabated. But this time the choice is a little more sensible than usual. A statue to Nicolas Leblanc, the inventor of the soda process, is to be erected in the outer court of the *Arts et Métiers* Conservatory. Also to

keep him from feeling lonesome they will give him for a *vis-à-vis* a statue of Denis Papin, who, the French claim, invented the steam-engine, or at least its fundamental principle.

NEW OFFICERS OF THE ACADEMY OF MEDICINE.—The newly-elected officers of the Academy were duly installed at the first January meeting. They are as follows:—President, Dr. Trélat; Vice-President, Dr. Sappey; Annual Secretary, Dr. Proust; Perpetual Secretary (as formerly), Dr. Bécclard; Members of the Council, Drs. Léon le Fort, Giraud, and Teulon. It must be borne in mind that the French Academy of Medicine includes among its members a number of pharmacists fixed by law; they sit as pharmacists, enjoy full membership as such, and are considered equal to their medical brethren both socially and scientifically. Hence the Academy of Medicine is not only the highest medical, but also the highest pharmaceutical, body in France.

FENAYROU IN NEW CALEDONIA.—Fenayrou, it will be remembered, is the pharmacist who, some years since, murdered Aubert, another pharmacist, under horrible circumstances. He escaped with a life sentence, and lately was sent to New Caledonia. Some Paris newspapers pretended that he had been set at liberty on reaching the penal colony, and had opened a pharmacy at Bourail. The rumour proves incorrect. It appears that, like other pharmacists who are fed at the Republic's expense for their shining virtues, Fenayrou was first employed doing rough work in the Government pharmaceutical laboratory. He has lately been allowed to act as an assistant under contract in the pharmacy attached to the penitentiary on the north-western coast.

CONTRACT PRICES FOR DRUGS.

The supply of drugs and chemicals to the Paris hospitals during the year 1886 was contracted for by tender last month. The following are among the contracting firms:—

G. COUTELA:—Red poppy petals, 4f.; red rose do., 5f. (the above with 19.60 per cent. discount); koussou, 3.20f.; cinchona bark, 5f.; manna, 5f.; gum tragacanth, 7.50f.; do. ammoniacum, 2f.; do. gamboge, 7f.; do. benjamin (Sumatra), 4.50f.; do. elemi, 2.20f.; do. galbanum, 3.20f.; do. myrrh, picked, 4f.; do. asafetida, 1.80f.; aloes (Cape), 1.80f.; scammony (Aleppo), 80f.; liquid styrax, 3.50f.; balsam tolu, 6f.; do. capivi, 5.50f.; camphor (Japan), 2.20f. (the above with 8.66 per cent. discount).

DAGOBERT:—Licorice root, 80f.; mustard seed, 49.16f., per 100 kilos.

RABOURDIN:—Grey Loxa bark, 5.62f.; cod-liver oil, 1.36f.; cantharides, 20f.; sulphate of quinine, 119.49f.; carbolic acid, 1.44f.

ALBERT & SALLE:—Almond oil, 2.80f.; rose water, 1.20f.; essence of lemon, 16f.; do. lavender, 20f.; oil rosmari, 12f.; do. thyme, 16f.; do. peppermint, 90f.; do. wintergreen, 50f. (the above with 25.70 per cent. discount); grey Peruvian bark, 3.11f. (net); castor oil, 1.48f. (net).

SOULÉS FRÈRES:—Cinnamon, 6f.; canella alba, 3.20f.; licorice in bars, 2.20f.; aniseed (pure China star), 2.75f.; do. (green Alby), 1.50f.; coriander seeds, 55c.; nutmegs (Molucca), 12f.; cloves (Bourbon), 3.75f.; cocoa-butter, 5.50f. (the above with 15.20 per cent. discount); gum arabic (pale Senegal), 3.29f. (net).

RONSSERAY FILS:—Honey, white, 1f.

CARRIÈRE:—Beeswax, white, 4.80f.; do., yellow, 4f. (the above with 10 per cent. discount).

BUCHON:—Cutch in slabs, 1.50f.; carbonate of soda (crystallised), 12c.; sulphate of iron, 40c.; do. of copper, 65c.; subl. sulphur, 25c. (the above with 15.65 per cent. discount).

FAVRE:—Opium (Smyrna), 30f. (net); codeine (crystallised), 1,700f.; morphine (crystallised), 350f.; chlorhydrate of morphine, 250f. (the above with 24 per cent. discount).

POULENC FRÈRES:—Iodine (crystallised), 35f.; iodide of potash, 30f.; do. of lead, 30f.; iodoform, 45f. (the above with 1 per cent. discount); bromide of potash, 4.63f.; sub-nitrate of bismuth, 19.25f.

A PHARMACIST'S NOTE-BOOK.

THE DRUGS OF MADAGASCAR.

WE went to the Pharmaceutical Society some time back to see a most extraordinary collection of plants and drugs exhibited under the auspices of Dr. Parker, a gentleman who had been formerly appointed physician to the Queen of the Hovas. Whilst acting in this capacity he despatched to England a very complete collection of the *materia medica* resorted to in that distant quarter of the globe.

Madagascar is the third largest island in the world, and its climate is, of course, very variable, in accordance with its vast size. In consequence of this diversity of climate it possesses a very rich flora. The practitioner just named, in co-operation with Mr. Barrow, an enthusiastic naturalist, forwarded to this country nearly 1,500 distinct species of plants, of which some sixty to seventy appear to be decidedly peculiar to Madagascar; moreover, about one hundred species in this collection are said to be totally new to science.

From a botanical and technical point of view the result of the labours of these two indefatigable collectors is doubtless of great interest, and may, sooner or later, become a matter of considerable practical importance. No one can possibly foresee what may be the uses of a new plant, nor the number of chemical preparations which it may in time be the cause of. We wish we could attach as much importance to the collection in question from a medical point of view. But here we are in presence simply of a state of savage barbarism and superstition; and it is not a little astonishing that in this enlightened nineteenth century a physician can sit down and describe with all appropriate gravity the medical properties of plants or their preparations from the data supplied by semi-barbarous reports overlaid with superstitious notions. Among the drugs we find some that are supposed to be very beneficial in bronchic or catarrhal affections. Of these perhaps the most curious is a large fungus, called "*Hofa-tafa*"; but the inhabitants make use of most of their medicines in the form of simple infusions or decoctions; tinctures appear to be quite unknown. A large class of drugs are set down as remedies for urinary and renal diseases, and these appear to be largely taken in the island, where, we are told about one man out of three is troubled more or less with stricture of the urethra. Another class comprises a quantity of vermifuge drugs with queer, unpronounceable names.

Dr. Parker has no doubt opened a new mine, and it may prove a mine of wealth both botanically and therapeutically; but for the present the chemical nature of all these drugs is utterly unknown, and their medical properties—or, rather, their uses—are almost entirely based upon the superstitious notions of the natives. Should we not feel heartily ashamed if the same remark could be addressed to ourselves? Are we quite sure that, in some instances, it might not apply?

RHINANTHUS HIRSUTUS.

Rhinanthus hirsutus is a familiar plant that is frequently met with in fields of rye. Thus the grains get occasionally mixed with rye, both here and in Germany. This is the cause of the peculiar black violet colour which is met with sometimes in the rye bread so largely consumed in Northern Germany. The colour is appreciable very distinctly when the proportion of *rhinanthus* grain does not exceed 2 per cent. of the whole flour. The appearance renders the bread objectionable to customers, but it does not appear to have acquired any poisonous properties.

About two years ago these seeds were examined by H. Ludwig, a German pharmacist, who found them to contain 8 per cent. of a greenish oil, with an odour recalling linseed oil and fish oil at the same time. When the seeds are boiled in rectified spirit a yellowish-green tincture is formed, from which the oil just mentioned separates when water is added. When the oil is separated by means of ether, a cloudy liquid remains, which leaves upon the filter a viscous bluish-grey matter. On evaporating the filtrate over a water-bath it becomes greenish-blue, and when brought down to the consistency of a syrup it slowly deposits prismatic crystals arranged in starlike groups. These can be readily purified by dissolving in water, and causing the liquid to crystallise again.

We have thus obtained a new and interesting product, which is yet very little known, and to which Mr. Ludwig has given the name of *Rhinanthine*. It has a bitter and then a sweet taste, dissolves easily in water and in spirit, is insoluble in ether, and quite neutral to either red or blue litmus-paper. In contact with alkalis its aqueous solution becomes yellow. Salts of lead and salts of iron have no action upon it. By the aid of a slight heat it reduces an ammoniacal solution of nitrate of silver. Nitric acid turns it brown in the cold. Warm sulphuric or hydrochloric acid also causes it to turn brown, but in these cases it evolves an aromatic odour. By being boiled with hydrochloric acid black flocks are deposited, and the supernatant liquid then reduces Fehling's solution of copper. The alcoholic solution, treated with hydrochloric acid, becomes bluish-green.

These reactions show that *rhinanthine* is a glucosid. Its analysis gave: Carbon, 47.94; hydrogen, 7.57; oxygen, 44.49; which the author formulates as $C_{55}H_{52}O_{40} + 8H_2O$.

The eight equivalents of water can be separated by heat before the temperature is high enough to induce decomposition. The therapeutic properties of *rhinanthine*, and the exact amount which the seeds will yield, are yet unknown. But we have often suffered from eating rye bread in Germany.

THE PRESERVATION OF MILK.

It may be useful to record a series of experiments made some time since by Professor A. M. Mayer, the results of which no doubt apply to many other substances besides milk. Mayer first found that milk turns sour much more readily at a temperature of 45° C. than at the ordinary temperature of summer (say, 25° C.). Raising the heat to 55° C., and maintaining the milk at this temperature for twenty-four hours, it could be kept longer without much decomposition and without turning sour; but it took a flavour of burnt milk, showing that some alteration in its composition must have been effected.

The most interesting experiments were those in which minute quantities of some preserving substance were added whilst the milk was kept at 16° C. (60.8° Fahr.). The three substances used were boracic acid, common kitchen salt, and salicylic acid.

Milk mixed with 2 parts of *boracic acid* in 10,000 turned sour in thirty hours, and coagulated in forty-seven hours. With 4 parts *boracic acid* it became sour in thirty-five hours, and coagulated in forty-seven hours, as before. With 6 parts of *boracic acid* it was sour in fifty-six hours, and coagulated in sixty hours. A similar quantity of milk with 2 parts of *salt* turned acid in twenty-six hours, and coagulated in thirty hours; with 4 parts of *salt*, turned acid in twenty-six hours, coagulated in twenty-five hours; and with 6 parts of *salt* became acid also in twenty-six hours, and coagulated in thirty-four. With 2 parts of *salicylic acid*, 10,000 parts of milk turned acid in thirty-three hours, coagulated in fifty-eight hours; with 4 parts of *salicylic acid* it turned acid in forty-seven hours, and coagulated in eighty-two hours; and with 6 parts of *salicylic acid* it turned acid in 144 hours, and was not coagulated in eight days. Ten thousand parts of the same milk left to itself, *without any addition* whatever, turned acid in twenty-five hours, and coagulated in twenty-eight.

Independently of these experiments, Mayer has adopted a process for preserving milk, which consists in adding to 10,000 parts of milk 8 parts of *benzoate of soda* (or 4 parts of *boracic acid*), and heating it for three hours to 50° C., after which it is transferred to hermetically-sealed vessels. The above experiments show that 6 parts of *salicylic acid* to 10,000 of milk prevents the latter from turning sour and coagulating for a length of time, but it is not known what influence such addition might have upon the health of children or adults using the milk daily.

HE HAD BOARDED THERE.—Servant (to drug clerk): Oi want twenty-foive cints' worth of powder. Drug Clerk: What kind of powder, face-powder? Servant: Oi don't know, sorr. Drug Clerk: Who is it for? Servant: It's for Mrs. Hendricks, the lady what kapes the boordin' house-beyant the corner. Drug Clerk: Oh, yes! I used to board with Mrs. Hendricks myself. She wants insect-powder.—*American*.

Veterinary Pharmacy.

BROKEN KNEES.

THERE is no time of year when broken knees do not occur, as the causes are many, and not always to be attributed to frozen and slippery roads, though the new year has been prolific of such accidents owing to the frozen snow.

Defective action or anatomical peculiarities are quite as much responsible for the many blemished knees we see, as are the "rolling stones" in the country and the asphalt in the towns.

A blemish on the knee of a horse, if he be a high-class one, reduces his market price by about 50 per cent. Sellers have always a good reason to account for an old scar, and the greatest ingenuity is displayed to cover such marks, or, when discovered by a would-be purchaser, to prove to him that the particular horse in question cannot be thrown down, and can jump a steeple if he likes. If dealers could be believed, horses hardly ever break their knees on the ground, but by striking the manger or rubbing the kneecap, or in a thousand-and-one other ways that occur to the inventive imagination of a man with a horse to sell; in fact, any way except by blundering down on them.

The term broken knees would seem at first sight to be an exaggeration of the accident commonly called by that name, and actually is so since the bones of the knee are very rarely indeed broken; but the magnitude of the damage done is not in the least overstated in the term commonly employed.

If the reader will observe the first dozen cab horses that pass his door, of which more than half will probably have blemished knees, he will notice that those affected have as a rule feet which turn out when in action; when standing it can be better seen—such a conformation leads to the animal striking the inside of the opposite leg just below the knee, where the large metacarpal nerve is very near the surface. The pain caused is so sudden and acute that the horse falls as if shot, and the violence with which he comes to the ground will sometimes cause his death afterwards, although the innocent "fare" may think it only a little cut. Many horses of excellent quality and character are extremely dangerous to ride on this account, and so find their way into the butcher's cart and the tradesman's van, when, but for this defect, they might have luxuriated in a nobleman's stable. So much then for the chief cause, which, if you happen to require horses in your business, you may do well to bear in mind.

The treatment of broken knees was formerly a very unsuccessful matter, and the practitioners were primarily divided into those who used powerful escharotics and those who poulticed the hard structures into a pulp. Modern science has found a half-way house, where the unfortunate victim of this accident can get treated on rational principles. It goes without saying that all broken knees should not be treated alike, since some are only skin wounds, some involve the tendons passing over that complicated joint, together with their sheaths and bursæ, and in a few the capsule of the joint itself is ruptured. By those not acquainted with the anatomy of the horse we may be forgiven if we say that the horse's knee is not the counterpart of the human knee, but of the human wrist, and, although its sphere of motion is not so great in a lateral direction, it is, nevertheless, about the most important joint in the body.

The end in view is in all cases to retain as far as possible the mobility of the joint with the minimum of disfigurement; but, however successful the treatment, it must not be forgotten that a horse whose knees have been once broken is more liable to fall than another with unblemished ones.

As a first application, tinct. benzoin co. and tinct. myrrh co. were formerly in great request, but good veterinary surgeons have mostly discarded these in the present day.

If a case is brought to your door, and an examination of the knee shows only a wounded skin, advise hot fomentations, in which may be mixed with advantage the following lotion:—

Liq. plumbi	..	..	..	..	..	..	℥xx.
Tinct. opii	..	..	..	..	..	..	3ij.
Glycerin	..	..	..	..	..	..	3ss.
Aq. dist. a 1	..	..	..	..	..	..	3viij.
M. ft. lotio.							

The liquor plumbi should be added last in dispensing the above, and about 2 oz. of the lotion added to each quart of hot water used in the fomentation. Afterwards apply carbolised oil (1 in 40) on wool, and put a clean dry bandage lightly over the part, at the same time directing the groom to keep the horse tied up for at least twenty-four hours. If there is much swelling and irritative fever, indicated by dulness and loss of appetite, bran mash should be given, and a moderate dose of aloes, 3 to 6 drachms in a ball, according to the size of the horse. When the sedative treatment, if we may so call it, has effected a reduction of inflammation and swelling, the consideration is how to make the blemish as small as possible when the cure is complete. If no repressants are used nature will in a very few days over-exert herself in the shape of granular masses, which, if unchecked, produce those "bunkley" knees which are such an eyesore afterwards and an increased danger. The good surgeon, like the good farmer, encourages nature to grow what he wants, and checks her in growing what he does not want.

In the case of a broken knee, the surgeon wants the hole filled up, but nothing whatever beyond, so by fomentations encouragement is at first given, and then when the surface is nearly reached he applies such remedies as will make the granulations of firm, slow, and enduring material, instead of soft and luxurious, as will inevitably follow if the first treatment is too long persisted in. Nitrate of silver in the stick form is very much used for the purpose of checking granulation in the above manner, but it has the serious objection of being extremely painful, very expensive, and ruinous to the colour of the operator's fingers—of course, holders can be used, but those who have had any experience will agree that it can only be done efficiently with the fingers, and the amount of arg. nit. in an ordinary holder will scarcely serve for one dressing, even if the common accident does not occur of breaking it off short and losing the piece in the straw. A much better agent in every way is chloride of zinc.

If the nitrate of silver plan be adopted a dry scab will form in a few hours, and by its pressure and the surrounding evaporation the surface of the wound will be shrunk. Each day this scab should be rubbed off and the remedy again applied, the result being that the surface of the wound contracts at every dressing—the skin being, of course, elastic, and an eschar never being so. True skin is never reproduced. The eschar consists of inelastic fibrous tissue, and is one of the reasons why a knee once broken has not the mobility it formerly had. If, instead of the disagreeable but effective treatment with arg. nit., it is decided to use zinci chlor., quite as good results may be obtained with infinitely less trouble. As soon as the granulating process has made sufficient progress, a lotion should be made as follows:—

Zinci chlor.	..	..	..	..	..	..	3i.
Spt. vini meth.	..	..	..	..	..	..	3i.
Aq. ad	..	..	..	..	..	..	3vi.
M. ft. lotio.							

To be applied frequently with a sponge, and allowed to dry on. No bandage need be used in a simple case such as we have described.

In the case of a broken knee in which the extensor tendons are bruised and more or less lacerated, the treatment must be somewhat different. To begin with, ascertain if any grit or foreign matter is in the wound, and remove it if found. Next, observe if the glycerine-like fluid from the bursæ is running in any great quantity, and, if so, do not foment beyond the immediate purpose of removing grit, &c., but apply a poultice as follows:—

Alum ust.	..	..	..	..	..	..	3i.
Cerat. resine	..	..	..	..	..	..	3ij.
Vaseline	..	..	..	..	..	..	3iv.
Lini. cont.	..	..	..	..	..	..	℥ss.
Aq. bulliens q.s. ut ft. cataplasma.							

The horse should be backed into a stall, and secured by the pillar-reins on each side. As there is a little art in poulticing a knee, we may here state that the best plan is to make your poultice and carry it to the patient hot; then place it on old calico or lint, and, before putting it on, wind about $\frac{1}{2}$ lb. of tow round the leg from the fetlock to where

the knee enlarges. Then there is no difficulty in keeping on a poultice by means of ordinary horse-bandages; but without this padding the poultice slips down, and in the morning it will probably be found that a tightened edge of bandage is torturing the wound, and the poultice is on the foot.

As regards medicaments, it is a safe practice in any serious case of broken knee to give a good dose of aloes at once; it reduces fever, and acts as what old writers call a "derivative." The swelling is generally great, and having to keep the horse standing for several days and nights increases the dropsical tendency which exists in so many horses, especially of the heavy kind; of course, as soon as possible the recumbent position will be allowed, but, until circumstances will permit it, the better plan is to give mild diuretics and tonics, as:—

Pot. nit.	3iv.
Pot. iodid.	3ss.
Pulv. gent.	3ij.
Glycerine q s, ut ft. bolus.	

Alt. nocte.

or the following, where the discharge is more yellow and offensive:—

Helleb. nig.	gr. x.
Ferri iodid.	3j.
Quinac sulph.	gr. xx.
Lini pulv., q s, ut ft. bolus.	

Alt. nocte.

A yellow and offensive discharge is a bad omen, and indicates at least inflammation of the bursa to a grievous extent, and if very copious it means an open joint, or inflammation within the capsular ligament, and the chances of recovery are much lessened, for, if the animal does not take on tetanus or a high degree of fever, he may have a permanently stiff joint. Good healthy pus should be recognisable, and easily distinguished from the other matter referred to by anyone who attempts the treatment of man or animals, but it may be mentioned that pus from a wound in a horse has a more evil odour, as a rule, than that of man. In such a case as we have now attempted to describe poulticing will probably be necessary for two, three, or four days, until pus flows freely; then, before the parts are rendered pulpy or degenerate, discard the poultice, and apply on lint or cotton-wool the following:—

Acid. carbolic.	3j.
Glycerine.	3j.
Aq. dist. ad	3viij.

M. ft. lotio. Bis die utend. ut supra.

This should be continued till the granulations reach the surface, when the wound should be sponged clean and the bandages discarded entirely. The following lotion should then take the place of the above:—

Zinci chlor.	3iv.
Spt. vini	3ij.
Aq. ad	3vj.

M. ft. lotio. Omni die applic.

Nothing more will be required to effect a cure and make a good level surface, but gentle exercise should not be forgotten, as it excites absorption of stagnant fluids, besides bringing fresh nutritive blood to the work of repairing the parts.

The chloride of zinc treatment is slower than that in which arg. nit. is used, but the granulations or new material produced are of much better quality, and we never remember to have seen a bad mend when treated on that principle.

Many things have been recommended to make hair grow on bald places, but nothing in our experience has produced such good results as a clumsy preparation of borax, which is as follows:—

Pulv. boracis	3ij.
Glycerine	3j.
Carbo animalis	3ss.
Vaseline ad	3xx.

M. ft. ung. Omni die utend.

Lastly, if a case of broken knees is brought to you, and you are satisfied that the capsule of the joint is ruptured, and the joint-oil running—*have nothing to do with it.*

TRADE-MARKS APPLIED FOR.

THE *Trade Marks Journal* publishes the following notice:—"Any person who has good grounds of objection to the registration of any of the following marks may, within two months of the date of this journal, give notice in duplicate at the Patent Office, in the form 'J,' in the second schedule to the Trade Marks Rules, 1883, of opposition to such registration." All communications relating to patents, designs, or trade marks to be addressed to H. Reader Lack, Esq., Comptroller-General of Patents, Designs, and Trade-marks, Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C.

From the "*Trade Marks Journal*," December 16, 1885.

"KALLICOMOS" over monogram, for a hair restorer. Brighton and Hove Co-operative Supply Association (Limited), Brighton. 38,443.

MAKER'S NAME through letter F, with words, "Trade-mark, Manchester," for a non alcoholic and non-aerated beverage. T. E. Fletcher, 449 Collyhurst Road, Manchester. 40,732.

"ROSS'S ROYAL" aerated waters. Nine fancy labels, bearing makers' name and address, designation of drink, and other matter; for aerated waters, W. A. Ross & Co., Belfast. 41,459.

"KIDNEY-WORT." Label, giving description of medicine and makers' address. Wells & Richardson Company, Australian Avenue, E.C. 42,721.

SAILOR'S HEAD, for chemical substances and anti-corrosives (44,233); raw or partly-prepared substances used in manufactures (44,234); preparations for laundry purposes (44,235). "THE SAILOR BRAND" for chemical substances and anti-corrosives (44,236); raw or partly-prepared substances (44,237); preparations for laundry purposes (44,238). "THE MARINER BRAND," for chemical substances and anti-corrosives (44,239); raw or partly-prepared substances (44,240); preparations for laundry purposes (44,241). "HUBBUCK," for chemical substances and anti-corrosives (45,330); raw or partly-prepared substances (45,331); preparations for laundry purposes (45,332). Thos. Hubbuck & Son, 24 Lime Street, E.C.

"WHITE BEAR." Ornamental label, with representation of bear on ice, and printed matter; for cod-liver oil. Hirst, Brooke & Hirst, Leeds. 45,245.

"HARVEST HOME." Oblong fancy label, with representation of giant lifting globe, and printed matter; for substances used as food or ingredients of food. Lever & Co., Wigan. 46,699.

"MRS. DAWSON'S RHEUMATIC EMBROCATION." Label, bearing above words over "Poison." R. Dawson, Radford, Nottingham. 47,127.

"PILKINGTON'S WEAVER'S TABLET PRESTON," for common soap. William Pilkington, trading as "The Preston Soap Company," Preston. 47,135.

"MUSTARDYNE." Round label, bearing pyramid on dark background, with printed matter; for a substance used as food. J. J. Schweizer, trading as "William Clarke," 62 Holborn Viaduct, E.C. 47,248.

"BRANDT'S SWISS PILLS." Round label, bearing above words and other matter. Elmain & Co., Frankfurt-on-the-Main. 47,254.

"CULLEN'S NEW SPECIFIC HERBAL CURATIVES." Square label, bearing above words and other matter. J. Cullen, 21 High Street, Peckham, S.E. 47,545.

"CURAÇAO BITTER." Round fancy label, bearing above and other words; for a liqueur. A. Collingridge, 11 Acton Street, Gray's Inn Road, W.C., and Alice Jones, Paris. 47,573.

FANCY LABEL, WITH DARK BORDER, and representation of three children on back of swimming alligator; for chemical substances used in medicine and pharmacy. T. W. Heilgers & Co., 22 Great St. Helen's, E.C. 47,623.

"ABBAY'S EFFERVESCENT POTASH." Label, bearing above and other words with representation of Shakespeare; for a medicinal drink. E. B. Cox, The Talbot, Nottingham. 47,626.

"CASTLE BRAND." Words under tower, with flying standard; for paints, &c. H. Rogers, Son & Co., Wolverhampton. 47,865.

"CASTLE BRAND." Tower, with letter "H" in centre over above words; for paints, &c. W. H. Holmes & Son, Newcastle-on-Tyne. 47,867.

REPRESENTATION OF TOWER between shafts of letter "H," and initials "H. B." in centre; for chemical substances and anti-corrosives, Harrington Brothers, Cork. 47,890.

ACORN OVER MONOGRAM, for mineral and aerated waters. Roberts & Son, 196A Peckham Rye, S.E. 47,912.

"**RAIMES'S PALM-TREE BRAND.**" Words on shield, with representation of hand holding palm branch; for chemical substances used for agricultural, horticultural, and sanitary purposes (48,056); ditto, used in medicine and pharmacy (48,057); raw or partly-prepared substances used in manufactures (48,058); substances used as food or as ingredients of food (48,059); illuminating and other oils (48,060); perfumery (48,061); polishing preparations and materials (48,062); chemical substances used in manufacturing and photography (48,316). Fred. Raimes, trading as "Raimes & Co.," Stockton-on-Tees.

SQUARE FANCY LABEL, REPRESENTING CHILD NURSING DOLL, for mustard. John Keens, St. Mary Cray, Kent. 48,333.

OUTLINE OF MONUMENT, for aerated or mineral waters. Charles Ashby & Co., Staines, Middlesex. 48,478.

ROUND FANCY LABEL, WITH FEMALE FIGURE GATHERING FLOWERS, and printed matter; for preparations for the toilet. R. Morrison, First Avenue Hotel, London, W.C. 48,481.

From the "Trade Marks Journal," December 23, 1885.

THREE FANCY LABELS, for lozenges made from salts extracted from natural mineral waters (46,141); natural mineral salts prepared as a beverage (46,145); salts used for medical baths (46,146). Cie. Fermière de l'Établissement de Vichy, Paris.

JAMES' IMPREGNABLE CEMENT. Round label, with representation of bottle on rock in sea; and border bearing printed matter; for a cement for household purposes. J. J. James, Dartmouth. 46,242.

"**MELERON,**" for a specialty for toilet purposes. R. Morrison, First Avenue Hotel, W.C. 46,562.

"**THE HOME PHYSICIAN.**" Representation of open box containing a medical instrument; for a galvanic apparatus. A. T. King, Cheltenham. 46,583.

"**OMUM-CARPOOR-ARAKH,**" for a medicine. F. H. Bowden, also trading as "F. Henry," 29 Lansdowne Road, Croydon. 47,607.

"**CITROCHLORIC ACID.**" Round fancy label, bearing printed matter; for a substance used in the manufacture of aerated water and confectionery. Bratby & Hinchliffe, Manchester. 47,759.

"**CASTLE BRAND.**" Words under tower, with flying standard; for furniture-polish. H. Rogers, Sons & Co., Wolverhampton. 47,866.

"**CASTLE BRAND.**" Tower with letter H in centre over above words; for furniture-polish. W. H. Holmes & Sons, Newcastle-on-Tyne. 47,868.

"**PERFECTION.**" Dark globe, with name on light ground; for furniture-polish. R. C. Haynes, trading as "Brackenbury & Co.," 74 Finsbury Pavement, E.C. 47,897.

"**BRAHEE,**" for a medicine for human use. W. Pinkerton, 14 East Claremont Street, Edinburgh. 48,095.

"**THE RED ROSE.**" Disinfectants and sanitary preparations. J. E. Beesley & Sons, 17 Red Cross Street, S.E. 48,302.

"**WEBB'S INDIAN TONIC,**" for aerated mineral waters. John G. Webb & Co., Islington Green, N. 48,397.

SHIELD WITH STARRED BORDER, bearing in centre a stag's head, in corners the letters "W. G. W. E."; for mineral and aerated waters. Wm. Gadd, 18 Neale Street, West Bromwich, 48,508.

From the "Trade Marks Journal," December 30, 1885.

ORNAMENTAL LABEL BEARING INSCRIPTION IN ITALIAN and duplicate representation of horseshoe with initials "F. M. F."; for non-alcoholic fruit-juices. F. Marangolo & Figli, Messina, Italy. 45,398.

"**IMPERIAL SAUCE.**" Rogers & Co., Yorkshire Sauce and Pickle Works, Leeds. 46,568.

"**THOMAS'S COLD-WATER SOAP.**" Eight labels, with different water-marks, bearing printed matter, and, in right top-corner, representation of Nineveh grotesque. Chris. Thomas & Brothers, Broad Plain, Bristol. 47,596-47,600, 47,602-47,604.

"**PHOENIX RISING FROM FUNERAL PILE,**" F OVER "A.D. 1680"; for chemical substances used in medicine and pharmacy. Godfrey & Cooke, 30 Conduit Street, Brut Street, W. 47,948.

"**IODISED COD-LIVER OIL**" in diagram, with *facsimile* of manufacturers' signature. J. E. Beesley & Sons, 17 Red Cross Street, Southwark, S.E. 48,238.

"**RUNNIO FOX,**" for chemical substances used in manufactures. G. & L. Pilkington, 22A Batavia Buildings, Hackin's Hey, Liverpool. 48,408.

"**NANKIPOO,**" Label bearing name on black ground and other printed matter; for a medicine for human use. David Anthony, Royal Arcade, Cardiff. 48,544.

"**SHARP'S FURNITURE-CREAM.**" Representation of small round table, bearing above words and other matter on the board. Henry Sharp, 32 Hyde Park Road, Leeds. 48,552.

"**PRICE'S LONDON PARAFFIN.**" Oblong fancy label, bearing above and other matter; for candles. Price's Patent Candle Company (Limited), Battersea, S.W. 48,575.

"**HOYLES' CANTHARIDINE BALM,**" for a preparation for the hair. George Hoyles, Holderness Pharmacy, Hull. 48,579.

"**WHITE ROSE WINDSOR SOAP,**" Label bearing above words and representation of rose; for common soap. James Jenson, Canal Works, Preston. 48,666.

INITIALS "G. M. Co." SURROUNDED BY BELT FORMING CIRCLE, for a condiment for use as food for cattle. The Goldstraw Manufacturing Company, Bilston. 48,713.

From the "Trade Marks Journal," January 6, 1886.

"**CASTLE BRAND,**" for chemical substances used in photography or philosophical research. Samuel Wills & Co., Castle Green Colour Works, Bristol. 41,681.

"**CARNICK'S SOLUBLE FOOD,**" for a food for infants and invalids. J. N. Beach, 24-25 Hart Street, Bloomsbury, London. 43,536.

"**FACE-ACHE PEARLS.**" Round label, with plain border; bearing the above words and other matter; for a medicine for human use. Archibald Paterson, 133 Govan Road, Glasgow. 47,657.

"**CURAVES.**" Square label, with plain border, bearing the above word and other printed matter; for a medicine for birds. E. H. Griffiths, Kidsgrove, Staffordshire. 48,096.

"**WINTER FLUID.**" Oblong label, with plain border, bearing the above words, the name of the preparation in French, and other matter; for a preparation for the skin. John Hallaway, 52 Castle Street, Carlisle. 48,173.

"**PEPSIN-MAGEN-BITTERN.**" Large ornamental label, with representation of coat of arms, and printed matter in German; for alcoholic bitters. Ernst L. Arrp, Kiel (Germany). 48,453.

"**WHITE CAUSTIC SODA.**" Oval fancy label, with ditto border, bearing printed matter; in centre, elephant over "70-%" on dark background; for caustic soda. Borries, Craig & Co., 2-4 Lombard Street, Newcastle-on-Tyne. 48,475.

"**MELERON.**" Representation of H.R.H. Prince Henry of Battenberg clad in coat of mail, bearing bannerette and scroll, with word "Meleron," and surrounded by printed matter; for a preparation for the cultivation of the moustache. R. Morrison, First Avenue Hotel, W.C. 48,482.

"**FAIRY BELLS.**" Representation of musical box, with name of preparation; for common soap and other articles for laundry purposes (48,500); for scented soap and other articles for toilet purposes (48,501). Hargreaves Gill, 44 Mill Lane, Blackburn.

"**ERIN INK.**" Words twice on cross and once on arc; for inks. William Harrington & Son, Cork. 48,514.

"**ASEPTOL.**" Ornamental label, bearing the above word and other matter in French; for an antiseptic liquid. C. Collin & Co., Antwerp. 48,828.

"**AKOLETHE,**" for a preparation of opium used in medicine and pharmacy. James Woolley, Sons & Co., 69 Market Street, Manchester. 48,835.

"**EAU SAVONETTE,**" for a liquid used in the manufacture of aerated waters. James Woolley, Sons & Co., 69 Market Street, Manchester. 48,836.

"**EASE FROM PAIN.**" The above and other words; for an embrocation for human use. W. Wilkerson, Rushden, Higham Ferrers. 49,101.

AN IMPORTANT INVENTION.—A very important invention, which will, as is said by some lighting engineers, completely revolutionise the present system of gas-lighting, has just been perfected by Dr. Auer in the chemical laboratory of the Vienna University. Briefly described, the invention may be said to consist in rendering a cotton wick incombustible by impregnating it with a metallic liquid. Thus treated, the wick, instead of burning, merely glows, emitting a radiance not unlike that of the electric light. The whole process is very simple, and the great advantage of the invention is that it may be applied to any gas-burner.

Medical Cleanings.

COCAINE IN DENTAL SURGERY.

MR. H. E. HARRIS, L.D.S., in *British Medical Journal*, sums up his experience thus:—

I have discarded all solutions as almost useless in dental surgery.

In extraction, cocaine has no power to deaden the pain caused by the tearing of the periodontal membrane from the alveolus and the rupture of the nerve, but will entirely remove that which accompanies the separation of the gum from the root of the tooth with the forceps, which is preliminary to the actual extraction. It is applied by introducing a small portion of the solid cocaine between the edge of the gum and the tooth with the point of a knife.

After extraction I always introduce a small portion to the bottom of the alveolus, after bleeding has ceased and it has been properly syringed out. If any dressing be required I place it upon the cocaine. This will be found to almost completely do away with the pain, sometimes very severe, which is frequently experienced for some time after an extraction.

Inflamed Pulp.—Cocaine applied in the solid form will deaden the surface of an exposed pulp, and when it is inflamed will cause speedy resolution.

Invariably in those cases where I used to use morphine in a dressing I use the solid hydrochlorate of cocaine instead, with the most satisfactory results.

POSSIBLE DANGERS OF COCAINE.

THE question whether cocaine is ever harmful was raised at a meeting of the Ophthalmological Society in November.

Mr. Nettleship said that during the last six months at St. Thomas's Hospital he had had a run of cases of panophthalmitis after iridectomy or cataract, and he had largely used cocaine discs. Cocaine was very hygroscopic, and the discs were therefore apt to be moist, and so might favour the development of organisms. He also wished to ask whether cocaine itself ever did any harm in solution. Kaeser, of Philadelphia, had lately expressed a belief that a 3 per cent. solution caused panophthalmitis, and Graefe, of Halle, had seen interstitial keratitis follow its employment. Mr. Hurry Fenwick had thought that it produced a discharge from the urethra when injected into the bladder.

Mr. McHardy said that he had a run of panophthalmitis after using cocaine in solution, and after careful inquiry he had come to the conclusion that it was because the cocaine was not fresh; he had then made it a rule not to use any that was twelve days old, and none of his cases had gone wrong since. He used an 8 per cent. solution in camphor water.

Mr. Edgar Browne (of Liverpool) said that he had suspected cocaine for some months, as he had had a run of ill-luck since he used it. He always had the solution made up with camphor water, and kept a lump of camphor in it, and his solution was almost invariably prepared fresh just before use.

Mr. Storey said that at St. Mark's Hospital they used a 2 per cent. solution of cocaine, made up with a saturated solution of boracic acid, and they had never had any bad results from it. All of them could remember preceding epidemics of panophthalmitis without any obvious cause, and he did not see why cocaine should cause it any more than atropine.

Mr. Gunn suggested that solutions of atropine were not always fresh, and might sometimes have been the cause of epidemics.

Mr. Lang said that in the only case of panophthalmitis he had met with in his own practice it was proved that the cocaine was not fresh; in fact, a fungus could be seen flourishing in the bottle.

Mr. Nettleship said that he had learnt that there was this difference between his practice at Moorfields and St. Thomas's—that at the former the cocaine solution was made up with a saturated solution of boracic acid. He said that of course he had seen epidemics of panophthalmitis before, but he had never known anything like so bad a batch as that to which he was now referring, for he had lost seven eyes in eight months.

COCAINE AGAINST MORPHINISM.—The means hitherto used to procure alleviation of the acute torture suffered by morphomaniacs during enforced abstinence are far from being efficacious, but cocaine, according to Professor Obersteiner, of Vienna, is a remedy of considerable value. He recommends the internal administration of the hydrochlorate of cocaine in doses of 0.05 to 0.1 gramme ($\frac{1}{4}$ gr. to $1\frac{1}{2}$ gr.) dissolved in water, four to six times per day, whenever the symptoms of morphine craving become acute. The internal administration he considers superior to subcutaneous treatment.

CONSTIPATION IN INFANTS.

[This subject has been discussed by correspondents of the *British Medical Journal*.]

DR. W. R. COSSHAM (Cirencester) has generally found much benefit from ordering the infant to be fed every morning with a cupful of gruel, which may be sweetened with treacle or honey. Further help is obtained by giving a teaspoonful of cod-liver oil twice a day, and using friction over the bowels every night with olive-oil on the palm of the hand. An occasional morning draught may also be necessary, such as tinct. podoph. $\mathfrak{m}\mathfrak{i}\mathfrak{j}$. (gr. \mathfrak{i} ad $\mathfrak{3}\mathfrak{i}$); pulv. ipec. gr. $\frac{1}{4}$; glycerini, $\mathfrak{5}\mathfrak{i}$; aquam anisi ad $\mathfrak{3}\mathfrak{ss}$.

L. suggests two or three meals of "Mellin's food" daily. He has found this useful, and has long since dispensed with drugs as much as possible in the treatment of some troublesome cases. If the infant is being nursed, two or three meals a day will be sufficient, and these may be dispensed with as soon as the object is attained, and resumed if necessary; but if it be living upon artificial food "Mellin's food" should be substituted.

Mr. E. Gibson Berkley says that the liquid extract of cascara sagrada, combined with minute doses of tincture of nux vomica, and made palatable with a little syrup of lemon or glycerine, will be found very useful. It should be given two or three times a day.

Sign-Post recommends feeding the infants on well-made oatmeal gruel and milk, in proper quantities, and at intervals. For an infant from four to six months old, he advises half the feeding-bottleful of milk, with the same quantity of oatmeal gruel, to be given every four hours. For the gruel a teaspoonful of the common coarse, but sweet (not bitter) oatmeal, is soaked in a little more than a tumblerful and a half of cold water for some hours, say all night; the mixture heated slowly in a saucepan for some time, then boiled for a minute or two, and lastly strained through a horsehair sieve.

Mr. M. F. Bush (Bristol) advises a spill of paper dipped in castor-oil about two or three inches, and inserted into the lower bowel. It should be used every day for a time.

TREATMENT OF ECZEMA.—Borax is the best application in scaly eczema of the scalp, both cleansing the head and arresting desquamation. Micble recommends a lotion:—

Boracis	grs. 15j
S.V.R.	℥iv.
Aq. roseæ	℥iv.

Boracic vaseline is an excellent application:—

Acid. boric.	℥ss.
Vaselin.	℥j.
Bals. Peru	℥viii.

M.

Balsam of Peru, as well as tincture of benzoin, is used on account of its stimulating properties.

COFFEE AS A DEODORANT.—According to the *Therapeutic Gazette*, Dr. Oppler, of Strasburg, finds that finely-powdered roasted coffee completely covers the odour of iodoform. The coffee should be roasted, rubbed up in a mortar to an extremely fine powder, and then mixed with the iodoform in the proper proportion. For example the following may be given:—

	Parts
Iodoform	1
Paraffin (soft)	10
Coffee (powdered)	0.3

Oppler also suggests rather a novel use for the coffee, viz., to render castor oil palatable, and he has found children take the following paste readily:—

	Parts
Castor oil	20
White sugar	10
Coffee (powdered)	10

M. A tablespoonful for a dose.

We should think there is room for such a mixture, and would recommend experiment by pharmacists.

THE THERAPEUTIC ACTION OF THALLIN.—The following conclusions have been drawn from experiments with thallin in the Stuttgart "Katharinen Hospital":—Sulphate of thallin in single doses of 0.25 to 1.0 gramme is a certain and prompt antipyretic. It is not a specific, but it is free from all evil co- or after-effects in cases of fever, particularly such as accompany cases of lung disease, differing in this respect from kairin. On the other hand it must be admitted that precisely in such cases of fever the use of thallin would be subject to some limitation, this remedy having the effect of increasing that debilitating and disagreeable perspiration, to which patients are prone. For adults a single dose of 0.5 gramme ($7\frac{1}{2}$ gr.), which is best given in a wafer, suffices to procure a reduction of temperature of moderate intensity and duration. The beneficent action of thallin has been particularly apparent in cases of erysipelas, where it has afforded far greater relief than either quinine or antipyrine.—(*Württ. Med.-Corr. Bl.*)

REMOVAL OF SUPERFLUOUS GROWTH OF HAIRS BY ELECTRICITY.—W. E. Stevenson, M.D., Electrician to St. Bartholomew's Hospital, in the *British Medical Journal*, says, in answer to a correspondent:—"I do not know of any English author who has given a detailed account of the mode of performing the above operation. It is a most tedious and tiresome undertaking, but efficient when thoroughly carried out. A galvanic battery of at least twelve cells is required. The number of cells to be used will depend upon their construction and condition, and also upon the resistance offered by the patient's skin. A small fiat electrode, covered with some substance which will retain moisture, should be placed under the patient's collar to the nape of the neck, and connected with the positive pole of the battery, and a fine needle connected with the negative pole should be inserted into a hair-follicle by the side of one of the hairs. In a few seconds a little froth will be seen by the side of the hair, and it can then be easily removed by a depilatory forceps. Only about 25 to 30 hairs should be removed at one sitting, and these at some distance from each other, so that no sore place is produced. It is not altogether a painless process, and, with the greatest amount of care, it will be found that some few hairs operated on each time will be reproduced. They can be attacked on a subsequent occasion, and with time and perseverance all the superfluous hairs will at last be effectually removed.

KAWA.—At a recent meeting of the Berlin Medical Society Dr. Lewin read a paper on the active components of Kawa root, viz., α and β Kawa-Resin. The former substance, a greenish mass of the consistence of balsam, obtained by exhausting the root with petroleum-ether, is particularly distinguished by its anæsthetic property, producing, when administered internally, total, and upon subcutaneous injection, local anæsthesia of considerable duration. Its effect on the eye is particularly noticeable. Kawa has been prescribed for about twenty years by French medical men in cases of gonorrhœa, the α resin being separated by the urine, and thus producing an anæsthetic effect on the urethra.

TREATMENT OF EARACHE.—It is said that by the following simple method almost instant relief of earache is afforded: Put 5 drops of chloroform on a little cotton or wool in the bowl of a clay pipe, then blow the vapour through the stem into the aching ear.—*Med. Record.*

DANGERS OF COCAINE.—American medical journals mention the case of a Chicago physician who is now in an asylum, and whose madness is traced to an inordinate employment of cocaine. In his earnest desire to investigate its wonderful properties, he became an *habitué*, and has drugged himself and his family down to the lowest depths of degradation. Taking cocaine himself, and giving it to his wife and little children, he mercilessly hacked their flesh to test its anæsthetic properties.

A NEW METHOD OF INTRODUCING MEDICINE INTO THE SYSTEM.—At a meeting of the French Academy of Medicine, held September 22, M. Broudel read a paper on the introduction of certain medicines into the system by means of electricity. If the electric current is made to pass through a solution of a salt, the salt is decomposed, the metallic base passing to the negative pole, and the acid, or metalloid, to the positive pole. The iodides are easily decomposed by electricity. In order to introduce iodine into the system, a rubber plate, moistened with a solution of iodide of potassium, is placed upon the surface of the body. Over this plate the negative pole of a battery is applied, while the positive pole is placed upon a part of the body towards which it is desired the iodine should travel. The iodine separates from the potassium, which remains at the negative pole, and passes with great rapidity through the tissues towards the positive pole. This may be demonstrated by testing with a starched paper, which becomes blue. A great number of substances can thus be made to traverse the tissues, and the applications of this discovery are numerous and important. M. Broudel has in this way cured uterine fibroids, a case of perimetritis, rheumatic ovarian neuralgia, and several cases of chronic rheumatism.

DISPENSING PRACTITIONERS.—Every now and again hard things are said by the lay press, and even by members of our profession, writing "at large," against practitioners who dispense. It should be generally understood that when a qualified medical man dispenses his own prescriptions, it is done not because he likes to do so, but because there is some reason why the course taken appears necessary, or at least expedient. Endeavours to make the public suppose they are not as well served when the practitioner is also the dispenser are unworthy. Everyone who knows anything about the facts must be well aware that this is not true. Meanwhile we are clearly of opinion that it is better that practitioners should only prescribe, not dispense; and anything like an overture on the part of druggists to render this universally practicable, in towns at least, will, we are assured, be hailed by the profession as a boon. The difficulties of solving problems of possibility are, however, very great, and no hasty measures or sweeping change in this matter will succeed.—*Lancet.*

Miscellaneous Formula.

TO WHITEN THE HANDS.—Mix thoroughly—

	Oz.
Eau-de-cologne	2
Lemon-juice	2
Pow. B. Windsor soap	6

When hard, it will be an excellent soap for whitening the hands.

COLOURED BOTTLE-WAX.—Red.—Pix burg., 100; resin. pini, 150; tereb. venet., 200; creta, 60; cinnabar, 4. Yellow.—Pix burg., 100; colophon., 150; tereb. venet., 200; chrome yellow, 120. Blue.—Pix burg., 150; colophon., 200; tereb. venet., 200; ultramar., 100.

MR. MAYET has employed with considerable success a new sort of cone in cases of neuralgia, composed as follows:—Choral hydrate, 1 part; menthol, 1 part; cocoa-butter, 2 parts; cetaceum, 4 parts. Rub the cone over the affected nerve, or, in the case of headache, on the forehead.

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RUBBER PORRINS AND SPREAD PLASTERS on page 203.

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HAY'S SOLUBLE ESSENCE OF GINGER. See page 86.

HAY'S NEW PREPARATIONS. See page 86.

HAY'S COMPOUND FORTIFIED ESSENCE See page 86.

EDITORIAL NOTES.

MORE FREQUENT PUBLICATION OF
THIS JOURNAL.

THIS journal was first published in September, 1859, and our long row of gradually swelling volumes testifies to the growing favour with which it has been received by English-reading pharmacists the world over. Last year we printed 748 pages of literary matter in the journal, or more than

100 pages in excess of any previous year, and our accounts show that we expended nearly twice as much for contributions in 1885 as in any previous twelve months. We have spared no expense to collect and present all the pharmaceutical news of the month, and the opinion of the trade is that we have not altogether failed.

But we are not satisfied with our present accomplishments. For the year on which we now enter we have made arrangements which will enable us to produce a better journal than heretofore. Our trade reports will be extended and made more thorough; we shall watch all the Mincing Lane markets very closely, and arrange correspondence with the chief centres of trade in foreign countries. We shall, besides, devote even more attention than heretofore to the mass of pharmaceutical material which the world now produces. It is most important that such information should be carefully collated, and we have confidence that in the respects alluded to we shall be in a position to satisfy all reasonable requirements.

To sufficiently supply the growing demands of the drug trade for a thoroughly efficient newspaper more frequent publication has become absolutely necessary. We shall meet this necessity by publishing THE CHEMIST AND DRUGGIST after March 15

TWICE MONTHLY,

Namely, on the 1st and 15th of each month. By this means we shall be able to keep up more closely with the progress of events, and our market reports especially will be greatly increased in value.

Notwithstanding the considerable increase which will thus be incurred in our staff and printing expenses, we shall make

NO ADVANCE IN SUBSCRIPTION RATES.

For ten shillings per annum we shall continue to supply the year's journals and the annual diary, all postage or carriage free to any part of the world, and we shall depend for our remuneration on the increase which we expect in our circulation and the consequent development of our advertising connection which we hope will result. Chemists who wish well to our enterprise can best aid us, and will certainly serve their own businesses, by a close study and frequent mention of our advertisement pages.

THE MEDICINE-STAMP ACT.

As representative of whatever discontent there may be in the trade, the Executive Committee of the Chemists' Trade Association have put forward for their own, and for general consideration, a suggestion of advocating and pressing for an amendment of the Medicine Stamp Act. This will commend itself to many chemists, and is, at any rate, a wiser policy than is that of abusing the Board of Inland Revenue for the enforcement of the Act which at present exists. The particular modification of the Act which the Executive Committee suggest is the extension of exemption from stamp duty to all Pharmacopœia drugs and medicines sold either alone or in combination, providing the composition of the medicine is shown on the label attached to it, notwithstanding that it shall be recommended for the cure or relief of any disorder. This would permit chemists to add to their labels, without incurring stamp duty, the uses and doses of medicine they sell. Some such information on the label would often be a decided public benefit. But it must

not be forgotten that such an exemption would encourage chemists to do a great deal more than this, and it is doubtful whether medical men would help us to get such a modification of the law. Secret medicines would still be liable to stamp duty, according to Mr. Barclay's proposal. Whether he would let the claim of proprietary rights in a preparation constitute a liability does not appear, but there would be no grievance in letting this condition remain as it is now.

We confess that we rather prefer the suggestion made in our correspondence columns last month, that the Act should remain as it is, but that the rates of duty should be modified, allowing $\frac{1}{2}$ d. stamps for articles to the value of 6d., 1d. ones for articles to the value of 1s., $1\frac{1}{2}$ d. ones up to 1s. 6d., and the others as now fixed. This plan would retain whatever benefit there may be in the medicine-stamp system, would give the opportunity of printing useful labels on a moderate taxation, and would benefit rather than injure the revenue. If there could be evidence that some modifications of this kind were really desired by the trade with something like unanimity, we can see no reason to doubt the probability of obtaining the assistance of the Inland Revenue authorities in carrying it into effect.

THE IMITATION OF MEDICINAL SPECIALTIES.

AN interesting little controversy has sprung up in our pages, in which a question of the moral rights of specialty proprietors on the one hand, and of retail chemists on the other hand, has been brought into view, though it has not been exactly treated. Mr. Fellows, who was formerly himself a chemist in Canada, and who is now one of the most successful among the proprietors of specialties, issued a circular some two or three months since to chemists generally, calling their attention to the fact that certain manufacturers were vending substitutes for his preparation through the country "to such pharmacists who, not appreciating the injury and injustice inflicted upon themselves and the medical profession, are induced to dispense these unreliable and possibly dangerous imitations instead of the veritable preparation." This "veritable preparation," according to Mr. Fellows, has gained the confidence of the first physicians everywhere by "unremitting labour, uniformity in manufacture, and the preservation of its respectability" during the past twenty years. For the sake of the medical profession, of "our clients the suffering public," and incidentally for the protection of "my capital in trade," Mr. Fellows appeals to chemists to discountenance the dishonest proceedings of which he complains, but which he does not very closely define.

Mr. Freeland, of Bathgate, sent a reply to Mr. Fellows, and we published a copy of that reply in our last issue. The public appearance of that reply, perhaps more than any serious prickings of conscience, induced Mr. Fellows to send a rejoinder, and elsewhere we print copies both of this letter and of further ones on this subject.

We do not propose to comment on this correspondence in detail. The disputants appeal to pharmacists, who will form their own opinion as to the merits of the controversy. But we desire to interfere to the extent of expressing regret that Mr. Fellows has not been a little more explicit. If he means simply that when physicians prescribe "Fellows'" preparation pharmacists ought to dispense that and no other, every one will agree with him. But it does not seem likely that Mr. Fellows took off his coat—to adopt Mr. Parnell's expression—for such an obvious piece of ethics as this. His circular refers to manufacturers who are vending substitutes for his "veritable preparation," and we want

to know whether it is this traffic which he describes as dishonest, as the theft of the product of his labour, and as no better than robbing the till?

It may be admitted that Mr. Fellows has done much to popularise the use of the hypophosphites in medicine; the law will sufficiently protect him against fraudulent imitations of his product; does he maintain that he has any moral right to the exclusive supply of syrup of hypophosphites?

The question answers itself. Preparations of the hypophosphites were made before Mr. Fellows touched them, and every pharmacist, and, indeed, every human being, has a right to make, and legitimately sell if he can, the best attainable syrup of hypophosphites.

No chemist has a right to dispense his own syrup when Fellows' is ordered, but every chemist has the right to put his pharmaceutical knowledge to the best use he legitimately can. This should be borne in mind by the specialists. If it be the case that they cannot prevent grocers and stores from selling their wares at ruinous rates, they will find that pharmacists will discover a better policy than that of merely "preserving their business by doing likewise," and it will not ultimately answer the purpose of makers of medical preparations to have it announced that their products can be obtained only from grocers and stores.

ANHYDROUS GUM SUBSTITUTE.

At the last drug sales in Mincing Lane some interest was manifested in a parcel of "anhydrous gum substitute," which was offered by Messrs. Green & Pitt. Eight bags were catalogued, each containing 2 cwt. The bidding commenced at 25s., and worked up to 36s. But this figure was not considered remunerative, and the lots were all bought in at 42s. per cwt.

The article was simply dextrin made up to look like gum arabic. It appears to be made by evaporating a solution of dextrin in shallow pans, and breaking up the clear residue into fragments. The applications of dextrin are well known, but it contains no arabin, and is not a substitute for acacia in pharmacy proper. The gum substitute has the appearance of elcar acacia sorts; it has a sweetish taste, is not so mucilaginous as acacia, and, unlike it, reduces alkaline copper sulphate solution.

FAILURES IN 1885.

BELOW we print a copy of the statistics of failures compiled and published by Mr. Richard Seyd, F.S.S. It will be seen that the total for 1885 is higher than was that for 1884, the retail traders who succumbed more than making up for a slight improvement in wholesale and financial firms. Last year was the second under the new Bankruptcy Act, which has now been in operation long enough to prove its efficiency. The figures here given are by no means sufficient by themselves to prove that the new Act is superior to the old one, but as far as they go they are extremely satisfactory. Under the Act of 1869 the annual crop of failures averaged over 10,000. Opponents of the new Act say the improvement is only apparent, the difference being made up by private arrangements and County Court administrations. This may be the case, but it is not much of an argument. No creditor need accept a private arrangement which is not satisfactory to him, and it may be assumed that when such is accepted the conditions are moderately fair. The object of a Bankruptcy Act is not merely to collect a trader's accounts. The law does not regard debt as a crime, and does not aim to protect the creditor any more than the debtor. But what the

law now does is to provide tribunals which shall impartially investigate all cases of failure to pay debts which may be brought before them. Under the last Act there was in most cases no judicial investigation. Quite apart from the question of results, it is an immense gain to the commercial world to know that 5,000 cases of insolvency have been fairly and fully sifted.

As far as the drug trade is concerned the figures come out remarkably well, as the subjoined short table will show more obviously. The failures of wholesale and retail druggists since 1877 have been as follows:—

	1877	1878	1879	1880	1881	1882	1883	1884	1885
Wholesale ..	20	41	30	18	17	9	35	11	6
Retail ..	76	96	95	95	62	72	61	28	22

It is impossible to assume that we have above a correct gauge of the relative prosperity of the trade in the years named. But when we remember that the number of persons engaged in the business has been practically stationary during these years, and that the proportion of recorded failures has never much exceeded 1 per cent., and in 1885 was not more than about 2 in a thousand, we may be satisfied that the business, if not a brilliant one, still returns an honourable living to the vast majority of those engaged in it.

The total number of failures last year was 5,089, as against 4,394 in 1884, 10,599 in 1883, 11,019 in 1882, and 12,005 in 1881. The largest number of stoppages in any one month took place in March, when 474 happened, June and July being next with 466 each. In the wholesale branches the failures were distributed in the following manner:—

	During the Year 1884		During the Year 1885	
	1st Half	2nd Half	1st Half	2nd Half
Agents, commission, yarn, &c. ..	22	10	23	21
Bankers, joint-stock banks, and foreign bankers	1	1	—	1
Boots and shoes	22	22	17	11
Brewers	1	—	—	—
Cigars and tobacco	1	2	1	1
Cement and asphalt	1	—	—	3
Coals	5	9	12	8
Contractors	5	3	2	3
Corn merchants, millers, &c. ..	9	10	6	9
Cotton and colonial brokers ..	2	3	3	3
Cotton-spinners and manufacturers ..	4	1	6	4
Carriers, tanners, & leather merchants ..	10	8	8	7
Discount and bill brokers	1	—	—	—
Druggists, &c., wholesale	7	4	4	2
Dyers, bleachers, and finishers ..	13	8	15	21
Dyers, bleachers, and finishers ..	5	4	7	8
Electro-platers	3	3	1	—
Engineers, founders, iron, metal, and hardware merchants	45	43	36	40
Financial agents	—	1	1	2
Glass, lead, earthenware, &c. ..	1	—	2	1
Gunpowder	—	—	—	—
Hats and caps	3	—	3	5
Hops	—	1	—	—
Jewellers	4	3	5	8
Manufacturers and merchants of woollens, worsteds, elastics, silks, stuffs, hosiery	35	33	29	34
Merchants	38	40	43	—
Oilcloth	—	—	—	—
Provisions	7	8	7	4
Rope, sails, &c.	2	1	4	2
Ship brokers and owners	13	11	10	7
Shipbuilders	4	3	—	2
Stationers, paper, &c.	3	9	3	4
Sugar-refiners	—	—	—	—
Tea, coffee, and groceries	6	3	4	3
Timber	14	6	5	4
Warehousemen and importers of foreign goods	9	5	14	10
Wine	12	18	11	15
Wool-staplers and merchants ..	5	7	4	3
Woollen and cotton wastes	6	2	4	2
Total	320	287	299	287
	607		586	

As to the retail trades and minor pursuits, Mr. Seyd gives the subjoined figures:—

	During the Year 1884		During the Year 1885	
	1st Half	2nd Half	1st Half	2nd Half
Accountants	6	4	4	5
Actors, artists, &c. .. .	3	2	2	1
Aërated waters, ginger beer, &c. ..	11	6	5	17
Auctioneers, house agents, surveyors ..	31	27	25	30
Bakers	43	40	54	48
Blacksmiths	14	8	13	12
Boat-builders, mast-makers	3	5	5	5
Brewers	23	7	9	4
Brick-makers	10	5	5	14
Brush and basket-makers	3	3	6	4
Builders, architects, &c. .. .	109	121	140	137
Butchers	36	31	29	23
Cab-drivers, carters, &c. .. .	1	3	3	2
Cab. omnibus proprietors, livery-stable keepers	6	9	7	12
Cabinet-makers, upholsterers, furniture, &c., makers	16	23	34	36
Carpenters, joiners, wheelwrights ..	46	41	41	57
Carriage-builders	9	13	13	11
Carriers, cart-owners	6	3	10	8
Carvers, gilders	5	3	3	4
Cattle and horse dealers	14	14	15	11
Chemists, druggists	13	15	15	7
Clerks and commercial travellers ..	48	45	48	36
Clerks in holy orders	16	7	9	12
Coal dealers	35	29	22	29
Coffee and eating house keepers ..	8	6	5	3
Confectioners	12	11	22	14
Coopers	2	3	1	2
Corn-handlers, hay and straw dealers	15	15	21	30
Cowkeepers, dairymen	8	15	13	14
Drapers, hosiers, &c.	67	72	99	79
Engineers in Navy and officers in Army and Navy (active and retired)	9	10	13	7
Farmers	143	124	128	142
Fishing-smack owners	1	4	16	6
Fishmongers, poulterers	17	9	17	24
Furniture-dealers, brokers	10	13	21	17
Gardeners, market-gardeners	4	9	4	10
General dealers, curiosities	25	21	37	39
Glass and earthenware dealers	11	15	18	9
Greengrocers, fruiterers, potato salesmen	30	19	28	21
Grocers, provision dealers, &c. ..	200	169	214	224
Hairdressers, perfumers	5	6	7	6
Hatters	3	8	11	6
Ironmongers, japanners, tinmen ..	45	49	47	45
Jewellers, watchmakers	24	27	38	47
Labourers, bricklayers, slaters ..	26	22	35	38
Leather dealers	6	3	6	3
Lodging-house keepers	8	4	6	12
Looking-glass makers, picture-frames	7	2	1	5
Millers and corn dealers	7	11	14	5
Milliners, artificial florists, &c. ..	10	6	15	16
Miners, colliers	2	3	2	2
Music sellers and publishers	1	3	5	5
Musical instrument makers and dealers	5	3	6	11
Newspaper proprietors	2	5	1	4
Nurserymen, florists	10	5	4	11
Oilmen	8	8	13	6
Opticians	3	—	2	2
Pawubrokers	4	6	2	3
Photographers	3	5	1	4
Plumbers, painters, gasfitters ..	34	49	48	51
Printers, stationers, engravers, &c.	26	29	39	37
Professors of music	—	1	4	5
Publicans	146	126	170	144
Saddlers, harness makers	13	12	16	15
Schoolmasters	6	6	11	13
Shipwrights	2	1	3	2
Shoe and boot makers and dealers ..	70	53	80	61
Solicitors	28	21	28	25
Stockbrokers, jobbers, &c.	12	7	5	6
Surgeons, physicians, dentists ..	13	15	18	8
Tailors	47	45	90	76
Timber dealers and sawyers	19	7	9	15
Tobacconists	12	17	23	20
Toy and fancy dealers	8	5	13	11
Tradesmen's assistants	13	9	25	28
Undertakers	1	3	6	3
Miscellaneous	122	123	161	136
Private persons	139	145	161	145
Total	1,948	1,839	2,300	2,203
	3,787		4,503	

THE VIRTUES OF THE BOARD OF INLAND REVENUE.

AN Inland Revenue prosecution at Croydon, under the Medicine Stamp Act, which we report this month, brought out some curious dicta. The counsel for the defendant is reported to have represented that his case was exactly analogous to that which Mr. Lamplough won some years ago, on the question whether a medicine which was not patented was liable to the stamp duty. If the counsel made that statement, it simply showed that he had never taken the trouble to read the Lamplough case. A more subtle point of his defence was that the medicines respecting which the actions were brought were all simple drugs merely diluted with water. If he could prove that assertion we presume his client would have a right to claim exemption. Exemption is granted to Bravais' Dialysed Iron on just that ground, namely, that it is a simple drug merely diluted with water. But the counsel's misapprehension of the Lamplough case was trifling compared with the extraordinary delusion of the Mayor, who would seem to regard the Board of Inland Revenue as some sort of philanthropic association. "The Bench," he said, "were much indebted to the Inland Revenue authorities for taking the matter up, for the medicines were dispensed to the poor, who could not protect themselves. Those noxious, nauseous medicines were about as deleterious as they could be." Did he understand that those tender-hearted authorities would let the defendant sell medicines twice as noxious if he will only pay 1½d. to them on each bottle? And had he any reason at all for describing the medicines as "noxious, nauseous, and deleterious"?

THE HOT-WATER TREATMENT.

AN eminent civil engineer has contributed to the *Pall Mall Gazette* an article narrating his experience with hot water as a remedial agent. This article he had at first sent to the *Lancet*, which journal declined it "on the ground that communications on medical subjects from laymen are never admitted." This, of course, proves that the report is worthless, but all the same it is interesting.

From January to September, 1884, the writer says he had repeated painful attacks of renal calculus. He is nearer fifty than forty, had always lived plainly and regularly, and was nearly a total abstainer. He is 5 feet 11 inches in height, and at the time of the first seizure weighed about 15 st. 5 lb. net, and measured 44½ inches round the waist. He had rarely suffered from anything but indigestion, evidenced by very frequent attacks of heartburn. For the renal trouble he had been dieted, and had been sent to Strathpeffer, but got no benefit. At the end of August he had to go to America on professional business, and while there consulted a Dr. Butler, of New York. On returning home he commenced the treatment which Dr. Butler had prescribed. This consisted in drinking nothing but hot water, and eating practically nothing but animal food for seventeen weeks. The water was taken in four doses per day, at a temperature of from 130° to 150° Fahr., on an empty stomach, and at least one hour before a meal. The first dose was taken at 7 A.M., second at noon, third at 5 P.M., fourth at 10 P.M., and a pint to a pint and a quarter each time. Lean beef steak, freed from fat, skin, and connective tissue, was recommended as the model food. This, with a little plain broiled codfish and occasionally a few sticks of celery formed his food for 121 days. No bread, potato, or any other vegetable, except a little pepper, mustard, and horse-radish, as condiments, was allowed. His appetite seems to have been satisfactory, to put it mildly, for he estimates

that during the treatment his daily average of solid food was 5 lb.

Dr. Salisbury, the initiator of the system, says that hot water is the most valuable of therapeutie agents, and, after an experience of five and twenty years, declares that if he were for ever restricted to only one means of medication, he would choose hot water. It must, however, be taken systematically, and it then acts as an internal bath, washes down the slime, yeast, and waste, and leaves the stomach fresh and clean for the next eating. It stimulates the appetite for solid food, and prevents a desire for much liquid during the taking of meals. By virtue of its high temperature it acts efficiently as a solvent; it promotes perspiration and elimination, and assists downward peristalsis.

The results attained in the case before us were that between October 11 and December 21 the patient had lost 39 lb. This was the irreducible minimum, for, although the course was continued until February 8, he got no lighter. At the latter date he began to eat a little rice with the beef, and gradually worked, as directed, into a regular diet of two parts of animal to one of vegetable food. This has been maintained ever since continuing also the early morning and the noon dose of hot water every day. He has not had the slightest touch of heartburn since the treatment was begun fifteen months ago, and, apparently, the kidney trouble has entirely disappeared. A similar treatment adopted by a gouty friend seems to have had equally good results.

CHEMISTS' BOOK-KEEPING.

WE are printing some letters of advice in reference to the best means of keeping accurate accounts in retail drug businesses. We can hardly think such advice is necessary for the majority of chemists, but inquiries addressed to us, and other information, show that there is, at any rate, so much carelessness prevalent, especially in the manner in which the cash-takings and spendings are recorded, that an allusion to the subject at this time of the year may not be quite useless.

The suggestions which our correspondents offer really cover the whole ground, and we have only to briefly moralise on them. Nothing will so well aid the transfer of a business at its proper value as a neat, complete, and accurate set of accounts; while in the event of a business going in the no-value direction and coming before a bankruptcy judge, such accounts will inevitably secure the favour of that important official to such an extent as to ensure an easy passage through the examination in the absence of any glaring misdoings. Moreover it must be remembered that incorrect accounts, and none at all, are under the present law absolutely dangerous.

A slovenly system of book-keeping is a habit which is easily acquired and which it is very difficult to get out of. Entries in the day-book should always be made by the person who has actually been concerned in the transaction. Such entries should be, if possible, always complete; that is, the articles referred to should be sufficiently described and priced at the time. Returns to wholesale houses should be entered in the day-book just as strictly as sales to customers. The posting in the ledger should be done frequently, regularly, and always by one person. The system often adopted of grouping in the ledger a number of small accounts under such a heading as "sundry accounts" is a bad one, and causes ultimate confusion. A few pages in a ledger are not so costly as to overbalance the advantage of having every customer's account separate. There is no obvious purpose in most cases in having separate ledgers, one for customers, and one for houses bought from. It is better to have all accounts in one book ruled with debtor and creditor

columns with figures always marked in; then at any moment, by taking out the balances, a tradesman can see how he stands financially. An account should be kept in the ledger with the banker, which should be debited with all amounts paid in, and credited with all cheques drawn.

The cash account in a retail business should be a record of full receipts and expenditure; that is, no payments should be made from the till. If it be thought unnecessary to enter all trifling payments in the cash-book, let there be a subsidiary petty-cash account, which can be made up once a week and entered in one sum—cash keeping petty cash supplied. In like manner cash pays so much weekly for household expenses.

It is useful to keep special accounts for particular ventures, quite apart from general book-keeping. For example, if it be decided to float a patent medicine, even on a small scale, it is well to keep an exact record of expenses of material, advertising, &c., as well as of sales, so as to know exactly whether the thing is paying its way or not.

Stock should be taken regularly once a year. By no other means can a tradesman ascertain his income definitely, and besides this, the practice enables him to keep his eye on a number of articles which are apt to get lost to sight. As a rule stock is priced out at current wholesale rates, and some 10 per cent. is deducted from the total. Whatever rate is adopted must be adhered to for comparison in successive years.

Chemists with sources of income outside their businesses should keep these entirely separate, and those with double businesses, as, for instance, drugs and aerated waters, would find it advantageous to keep double sets of books.

These observations seem almost too obvious to make, but we are assured that something of the kind will be useful. One correspondent has promised us an article showing how a system of double-entry can be adapted to a retail drug business. We do not see how this is practicable, but shall be very willing to learn.

THE NORTH BRITISH BRANCH OF THE PHARMACEUTICAL SOCIETY.

IN an inaugural address from the Vice-President of the North British Branch of the Pharmaceutical Society (Mr. H. B. Baidon), read at Edinburgh on December 9, we have lately been furnished with a record of the rise, progress, and impending fall of the Branch, from the Scotch point of view. This address has called forth what seems to be an official counterblast from the head office of the firm at Bloomsbury, and between the two narratives we are able to get some idea of the "Scotch difficulty" which presented itself several times last year.

The Branch originated, it appears, in 1851, when half-a-dozen members of the Pharmaceutical Society residing in Edinburgh, and acting on behalf of their Scotch *confères*, we presume, resolved to take some action in regard to the Pharmacy Bill then proposed. The Bill was for Great Britain, but there was nothing about Scotland in it; and this was unsatisfactory to Scotch chemists, who felt that they should either have powers under it or that it should not apply to Scotland. An appeal to their parliamentary representatives strengthened them in this view, and with this backing they boldly went forward to the promoters of the Bill with a demand for a board of examiners for Scotland. The demand was poohpoohed, but the Scotchmen laid bare their alternative; and the thought that the Pharmaceutical Society of Great Britain would degenerate into the Pharmaceutical Society of England induced the promoters to reconsider, and ultimately to agree to, the suggestion. But

the Scotch members got besides, a sum of 50*l.*, to set up a semblance of official authority—to start a branch in fact. Branches were plentiful in those days, only others had not the Scotch substantiality of money grants. The Branch in Edinburgh was nameless for about two years of its infancy, but Jacob Bell visited it in the course of his journey over the island, and, with general approval, named it the North British Branch. So far Edinburgh was pleased, and Aberdeen, Glasgow, Dundee, and other towns were quickly drawn into the fold, though it is stated that the Aberdeen Local Society was half inclined to advocate that the Pharmaceutical Society should be incorporated with themselves. The committee in Edinburgh, reappointed during Mr. Bell's visit, blossomed a few months later into a "Council," and for eighteen years quietly fulfilled its duties, which were chiefly local; it had no imperial powers, evidently had no wish for them, and its most important function was to select fit and proper persons to be examiners. Things went on smoothly until 1871, when Mr. Fairlie, of Glasgow, as the leader of a compact body of discontents there, wanted the Scotch Board of Examiners to meet in Glasgow. By statute it had power to do so. Glasgow was larger than, and had as good a right to the good things as, Edinburgh. But Mr. Fairlie did not get his way, and thereupon set to work to make things lively for the "self-elected Council" of the Branch. The late Mr. John Mackay defended well the camp which he had helped to form, and proved that the Council was not self-elected, but had always been elected at the annual meetings of the Scotch members, the importance of which Mr. Fairlie appears to have under-estimated by non-attendance. The Council of the Society in London looked on, not calmly, it appears, for immediately after the little internecine war, it began to re-arrange its household in the North. Things were in a mess, it was said; the English version gave the "mess" a situation between heaven and earth, which, translated into everyday phraseology, means that the Branch was domiciled on the flat system, and this appeared undignified to the English mind. As far as we can gather, there seemed no lack in the Branch of what is known in Bloomsbury Square as "dignity." University professors, medical men, and men of science seem from the beginning to have given the Branch their support, and taken part in its meetings, festive and pharmaceutic. But this "flat" business hid all this from the Council in London, who did not appreciate the Edinburgh custom, which inferred that the higher up a man lives the higher he is in the social scale. Therefore it was agreed to make a change, and the agreement appears to have been mutual. There was something else in dispute, however, and it required three of the Scotch Fathers to come up to London to settle it. What this something was is a bone of contention. It could not have been the new domicile, for that, as we say, had been mutually agreed upon, but this something had to be fought for, and was gained. According to Mr. Baildon, the something was the title "Council," as applied to the Scotch Executive. This is denied from the opposite quarter on the ground that there is no evidence. Is there no evidence in Bloomsbury Square? In 1884 the old complaint turns up again; the branch establishment was inefficient for its work, and the Council, or the President thereof, bought a house in Edinburgh. On the occasion of the official opening of this house the President took a few of the leading Scotch pharmacists into his confidence, and told them that now that they had got a nice house they must conduct their business properly. He had just passed through a trying period, in which the Pharmaceutical Society had figured as a two-headed monster. Decapitation was necessary, and he thought that the process might begin with the unpretending

head; but as this was a Scotch head, the President suggested to his Scotch friends that they should set to work—Frankenstein like—and form a new body for the discarded caput. If, in other words, the Scotch pharmacists formed an association of their own, they could call their Executive and their chief what they pleased, and their Society would have the privilege of conducting the Pharmaceutical Society's Scotch affairs. Thereby were to be solved the difficulties of the position. Scotland, even in its remote districts—even Skye—was to be drawn into touch with the pulse-throb of Bloomsbury Square, and the days of the trouble of the Branch would be ended.

The Scotch Council considered the President's proposal, and came to the conclusion that an independent Scotch Association spelt ruin for the Society's Scotch interests, and as loyal members they would have none of it. Then followed deputations; endeavours to whittle by-laws to meet new proposals which were now unconstitutional; adjourned meetings; petitions to the Privy Council from Scotland threatening with extinction a laboriously-planned education scheme, owing to Scotch action on an entirely different issue, proving that the Land of the Thistle is true to her old motto—*Nemo me impune lacessit*.

THE CHEMISTS' TRADE ASSOCIATION AND TRADE-MARKS.

WE have frequently urged the extreme importance of watching the applications for trade-marks. If reported only in the official *Trade Marks Journal* not one person in ten thousand will ever see the application; and yet it may be that the mark, if granted, will give to an individual an exclusive and irremovable right to a title of some article common to a large or small section of the trade. For this reason we have thought it desirable to report the applications for registration of trade-marks for such articles as are sold by chemists and druggists. The importance of the matter was also obvious to the Executive Committee of the Chemists' Trade Association, who have successfully opposed several marks which, if registered, would have been likely to cause inconvenience and sometimes injury to chemists and druggists generally.

But opposing trade-marks is not a perfectly costless amusement. Often the applicant aimed at surrenders without a contest; but he may not always be so accommodating. Then the opposer must be prepared to deposit 200*l.*, and willing to lose the costs of a trial if he cannot maintain his contention. The Association's funds have dwindled to such a modest figure that at the outside they dare not threaten opposition to more than a couple of applicants at once, while failure in those two cases would close their career. Individuals will not oppose except in rare cases, so that there is not left much restraining influence over the mark-grabbers.

Still we would advise any chemist who sees one of his own titles going, to at once communicate with the Trades Marks Office, as the Registrar has power at discretion to refuse to register a mark, and he will refuse in cases where overwhelming evidence that the mark is a common one is brought before him.

It does not appear that the Trade Association will altogether abandon their vigilance in this matter, and no doubt, if any particularly flagrant case should turn up, they would easily find the necessary support. Their lack of funds is not, however, altogether to be regretted if it saves them from embarking in unjustifiable enterprises such as the one they had in view of contesting with Mr. Condy his right to register his own name. The honest part of the trade can hardly desire to subscribe for such an object as that. We have the proposition put

forward that Mr. Condry having patented a certain preparation, he loses not only the exclusive right to the process after the patent has expired, but also the exclusive right to his own name, which, be it remembered, he never took out a patent for. The Association's solicitor is confident that a victory could be gained on this point. If it were gained the advantage could only be employed with dishonour, for, if the law should say that Mr. Condry has now no exclusive right to the term "Condry's Fluid," morals would surely tell us that other people have no right to the term at all, and, unless the Executive Committee should repudiate the intention of employing funds for harassing firms in their legitimate businesses, we can hardly wish them a more plentiful provision.



AND

Literary Notes.

The Pocket Formulary. By Henry Beasley. Eleventh Edition. London: J. & A. Churchill. Pp. 517.

FAMILIARITY with Beasley's handy volumes is calculated to make us inclined to insensibility to the amount of work put into them, and to their usefulness to chemists and druggists. The new edition of the "Pocket Formulary" presents an opportunity of re-examining the work. The last edition was published in 1877, and several new Pharmacopœias have been published since. These have all been faithfully incorporated, and even the official "corrections" lately issued have been recognised. Besides containing the chief formulæ of the principal national and hospital Pharmacopœias, a large number of established pharmaceutical formulæ are given; but, as a rule, guesses at popular proprietary medicines are excluded from this volume. We have not counted, but should suppose the compact little volume contains at least 4,000 formulæ, many of which we should not know where else to find.

History of Homœopathy: Its Origin; its Conflicts. By Wilhelm Ameke, M.D. (Berlin). Translated by Alfred E. Drysdale (Cannes). Edited by R. E. Dudgeon, M.D. Pp. 445. London: Gould & Son.

THE combined talents of the learned authors of this work have not produced a happy result. A page taken in any part of the book is sufficient to show that Dr. Ameke is a partisan, not an historian. Dr. Drysdale's translation is stiff and ungraceful. Here is a specimen: "The article on ammonia is excellent. He examines (page 290) it, among other things, for the carbonic acid it attracts." Dr. Dudgeon, the editor, claims to have carefully revised Dr. Drysdale's manuscript, and to have superintended its passage through the press. There are scores of unpleasant slips throughout the book, such as somebody's advice "had been followed only *two* generally" (page 34), and "the principle cause" (page 302), which are not creditable to such a distinguished editor. Hahnemann, his virtues, his learning, and his persecutions form the theme of the book. There is very little other history beyond the refutation of subsequent critics, who would appear to have been generally animated with the meanest of motives.

The perpetual assumption of living martyrdom which homœopathic authors have adopted is undignified, and is tending towards the ridiculous. It wins adherents, no doubt; a pleasant sort of persecution is one of the most delicate of modern pleasures, and homœopaths make the most of what they can get in this way. A contemptuous allusion in a medical work is certain of quotation in their journals, and, if there is no allusion at all, our friends see only further evidence of the conspiracy to ostracise them into which all the profession have entered.

It is right to remark, however, in reference to this work that it displays a singular amount of diligence in seeking out,

all contemporary criticisms on Hahnemann's work and works. Hahnemann's criticism of the medical practice of his time, much of which applies equally to the present, is always shrewd and amusing. And by abundant quotation Dr. Ameke proves Hahnemann's singularly close acquaintance with pharmacy and materia medica. This, perhaps, explains, or, it may be, is explained by, the fact that he married the daughter of an apothecary. We are inclined to regard the author's sketch of the chemistry and pharmacy of a hundred years ago as the most interesting and the most valuable chapters of his work.

Machinery for the Manufacture of Nitrate of Soda at the Ramirez Factory, Northern Chili. By Robert Harvey, Assoc. M.Inst.C.E. Published by the Institution of Civil Engineers, 25 Great George Street, Westminster.

IN this paper, which is a reprint from the Proceedings of the Institution of Civil Engineers, the author gives an account, with drawings, of machinery recently fitted up under his direction for the Ramirez works in Chili, the largest of the kind in the world, the property of the Liverpool Nitrate Company (Limited). The plant and fitting cost 110,000*l.*, and the works are capable of producing 6,360 tons monthly, but, like all the other establishments, are at present limited to an output of 40 per cent. of their productive capacity.

A Bookseller of the Last Century. Being some Account of the Life of John Newbery, and of the Books he Published. By Charles Welsh. London: Griffith, Farran, Okeden & Welsh. Pp. 373. 21*s.*

WE have given in this journal some account of the business founded in St. Paul's Churchyard nearly 150 years ago by John Newbery, formerly of Reading. Mr. Welsh, a partner in the firm which now carries on the publishing and book-selling business which Newbery founded, and on the same spot, has deemed the history of his commercial ancestor worthy of record in a guinea volume. John Newbery lived in an interesting environment, and Mr. Welsh has made a pleasant narrative out of the somewhat scanty materials which history can furnish of a man who lived more than a century ago, and whose story was entirely a personal one. He introduces his work modestly enough; but actions speak louder than words, and, when his firm offer the work at 21*s.*, we are bound to say that we think they have estimated its importance too highly.

John Newbery does not seem to have been a man of extraordinary genius, nor did he do deeds of startling heroism. But there were not many men in his century who left behind them work which has stood so firmly as his. The two businesses which he founded, the publishing and the patent-medicine warehouse, are flourishing to-day, the first on the spot where he planted it, the second under the control of his direct descendants. He published the "Vicar of Wakefield" and a multitude of other books, quite a number of which are on sale to this hour. He is suspected of having written "Goody Two Shoes," and perhaps some other of the popular children's stories for which he became famous. He introduced, advertised, and made popular Hooper's Female Pills, James's Fever Powder, and Bateman's Pectoral Drops, all still in daily demand. Lastly, he founded, among other magazines and newspapers, the *Public Ledger*, the oldest daily paper in London, which still appears. That is a fair tale of solid, lasting work for one man to have accomplished.

Dr. Johnson wrote a sketch of him in the "Idler," under the title of Jack Whirlur, "whose business keeps him in perpetual motion, and whose motion always eludes his business: who is always to do what he never does, who cannot stand still because he is wanted in another place, and who is wanted in many places because he stays in none." Goldsmith introduces him into the "Vicar of Wakefield" as "the philanthropic bookseller in St. Paul's Churchyard who has written so many little books for children. He called himself their friend, but he was the friend of all mankind. He was no sooner alighted than he was in haste to be gone, for he was ever on business of the utmost importance, and was at the time actually compiling materials for the history of one Mr. Thomas Tripp. I immediately recollected this good-natured man's red-pimpled face, for he had published for

me (says Dr. Primrose) against the Deuterogamists of the age, and from him I borrowed a few pieces to be paid at my return." Goldsmith is also credited with the authorship of a charade on his publisher, which, for the sake of the poet's reputation, we hope was impromptu. It ran thus:—

What we say of a thing which is just come in fashion,
And that which we do with the dead,
Is the name of the honestest man in creation;
What more of a man can be said?

Mr. Welsh rescues Newbery's reputation from some obloquy which has been carelessly cast upon it in reference to his paying the author only 60% for the "Vicar of Wakefield" at a time when Goldsmith was in pecuniary difficulties. Mr. Welsh shows from old accounts that eight years after the first publication, when three editions of the novel had appeared, there was still a balance of 2*l.* 16*s.* 6*d.* on the wrong side for the publisher. The fourth edition, which consisted of 1,000 copies, and was sold at the rate of 16*s.* per 100 sets, yielded a net profit of 99*s.* 8*s.* 3½*d.*, but this was not realised until after Newbery's death.

Newbery's patent-medicine transactions, which no doubt contributed materially to his fortune, are not told at so much length as are his literary affairs. In 1743 he and three others united to pay John Hooper, of Reading, 100*l.* for the right to vend that gentleman's female pills for fourteen years. Dr. James and Dr. Johnson both came from Lichfield, and it is likely that one introduced the other to Mr. Newbery, but which was his earlier acquaintance is not known. Bateman's Pectoral Drops were patented by the father of Robert Raikes, the reputed originator of Sunday schools; and a facsimile of the original agreement between Robert Raikes and John Newbery in the handwriting of the former, agreeing that Mr. Newbery should compound and advertise the preparation, and that profits should be equally divided, is published with this volume. Mr. Newbery's son Francis afterwards married a sister of Robert Raikes.

Mr. Welsh gives many instances of Newbery's skilful advertising. Besides direct advertising, there are numerous references in his books either to other publications of his or to his medicines. We have already quoted the puff of himself in the "Vicar of Wakefield." Another case occurs in the famous "Goody Two Shoes," wherein little Margery's father was "seized with a violent fever in a place where Dr. James's Fever Powder was not to be had, and where he died miserably."

Evidently John Newbery was active, shrewd, live, and withal honest and even generous; and with these qualities he made his fortune, and started enterprises which are still in vigorous operation.

The Light of Life; or, The Secrets of Vegetable and Animal Development detected and explained in strict conformity with known Natural and Chemical Laws. Edited by Joseph John Kain. London: Wyman & Sons.

THE author of this curious work evidently believes that he is promulgating some entirely novel and revolutionary views, based, as he claims, on "the known laws of nature, and on the known laws of chemistry." His unphilosophical distinction between the two sets of laws does not favourably impress us at the outset. The progress of our studies is not much happier. With most of Mr. Kain's definite statements there is no reason to disagree. He very earnestly aims to establish that reproduction of life requires a process of decomposition, and that subsequent development is a process of consolidation. This, mixed with some fantastic notions about chlorine being the element of the sun, hydrogen of the earth, and so on, which are not worked out, seems to be the base of his teaching. Founded on this are attacks on the Darwinian theory, the Christian religion, vaccination, water rates, the germ theory of disease, and the theory that carbon and carbo-hydrates are the source of human heat. We have tried hard to seize the thread of argument which we believe runs through the various chapters of the book, but it eludes us. We can only hope the author will find brighter students, and critics with more leisure than we possess, or his school will be a very limited one.

Select Methods in Chemical Analysis (Chiefly Inorganic). By William Crookes, F.R.S., V.P.C.S., editor of the *Chemical News*. Second edition, re-written and greatly enlarged. London: Longmans, Green & Co. 1886. 24*s.*

SOME years have elapsed since the first appearance of this work, so well known to chemists, and vast progress has been made in methods of investigation. The issue of a new edition will be welcomed by every worker in chemistry. The present edition bears little resemblance to its predecessor save in title, as it is re-arranged and almost re-written, and it is altogether a more extensive and comprehensive work. We have the assurance of the author that he "has merely given such methods as have been proved in his own laboratory. Others—possibly no less efficient—have been passed over because he cannot vouch personally for their value." From a chemist of Mr. Crookes' standing such an assurance is of great value, and it constitutes, in our opinion, an important feature in the work. Life is short, and men busily engaged in the pursuit of any branch of chemical investigation, or dependent upon the science as a profession, can ill afford to spend their time testing the value of the hosts of methods published from time to time. It is a boon to them to have in this compact form a concise account of methods which have been critically examined by one of the most accomplished experimentalists of the century.

In the arrangement of the work the natural system of classification is adopted, and the elements are dealt with in the groups into which they are divided by their chief chemical properties of analytical interest. It would be difficult in a short space to convey accurately the character of the information given in the case of each of the elements. It is not purely analytical, as there are numerous references to properties of peculiar technical importance, and to facts of physical interest. The book, in short, contains a larger amount of out-of-the-way practical information than is to be found in any single work with which we are acquainted. As might be expected, the rare elements receive a liberal share of attention, and full details are given of those methods of research with which the author's name is so honourably associated. If there is a fault to be found with the book, it is, perhaps, the absence of more frequent references. It is important to be able to turn to the original publication of a new fact or the description of a new method; at any rate, it is a satisfaction to be able to do so with as little trouble as possible. The author, however, rarely gives such references, and in many cases it would be difficult to trace the information to its original source. There are a number of well-executed illustrations, chiefly in the latter part of the book, and the work concludes with some useful tables and a good index.

The Physician Himself, and what he should add to his scientific acquirements in order to secure success. By D. W. Cathell, M.D. Fifth edition. Baltimore: Cushings & Bailey. Pp. 284. 82.

THIS is an intelligently written volume of maxims and advice to young physicians bearing on all their relationships, social and professional. It is evidently the work of an observant and practical writer. The topics discussed are too various to admit of any general review, but it may be interesting to quote the author's remarks indicating how he advises his readers to determine whether this or that drug-store is worthy of confidence.

"Among the distinguishing features of a properly-conducted pharmacy (he says) are:—

1. Proprietor a practical pharmacist. 2. Competent and courteous assistants. 3. Pride and skill shown in selecting and preparing pure medicines. 4. Full line of pure drugs kept. 5. Store neat and orderly. 6. Quiet and discipline maintained. No loungers. 7. No liquors sold as beverages. 8. Not a bazaar of general merchandise. 9. Nostrums shown and sold only when called for. 10. No habitual prescribing. 11. Charges neither cheap nor exorbitant. 12. Prompt attention and accuracy characteristic.

"Among the features that mark improperly-conducted ones are:—

1. Patent-medicine signs prominently displayed. 2. Patent and proprietary remedies paraded and pushed. 3. Wines and liquors sold as beverages. 4. Engrossing attention to sale of soda water, cigars, tobacco, fancy goods

&c. 5. Indiscriminate renewals of prescriptions. 6. Habitual prescribing over the counter. 7. Disparagement of physicians to the laity. 8. Loose management of store. 9. Store a resort for political or other cliques. 10. Unchaste conversations and conduct. 11. Dealing in articles used for immoral purposes. 12. Unnecessary delay and detention of customers."

Chemistry: General, Medical, and Pharmaceutical. By John Attfield, F.R.S., &c. Eleventh edition. London: Van Voorst. 15s.

WHEN a book of this kind has reached its eleventh edition it is almost beyond the reviewer's ken. But "Attfield's Chemistry" is so essential a part of British pharmacy that this new edition, comprising, as it does, the chemistry of the new Pharmacopœia, is an event which cannot be disregarded. Of the ten previous editions five have been published for British and five for American circulation. Much work has evidently been put into this edition, as, besides the modifications and additions made necessary by the novelties in the Pharmacopœia, a great deal has been done to bring up the section on organic chemistry to the most modern level. The chemistry of organic compounds and the artificial products resembling these is lucidly presented, as far as the present condition of the science allows, and, as far as we can see, an equally careful revision of all other departments of chemistry which the book professes to consider has been given. Especially it may be mentioned that another thousand references have been added to the index, bringing the total of entries up to about eight thousand.

The *Pharmacist*, of Chicago, after a mixed career of nineteen years, has been sold to the proprietors of the *Western Druggist*, of the same city, and will henceforth cease to appear.

Trade Notes.

MR. B. KÜHN, 36 Mary-at-Hill, E.C., has been appointed agent for Finkler's Papayin.

CASTLE STREET, HOLBORN, has changed its name to Farnival Street, which should be noted by correspondents of Messrs. Bourn, Johnson & Latimer.

MESSRS. JOHNSON, MATTHEY & Co. have taken into partnership Mr. Richard Davies Matthey, who has for several years assisted in the business.

MR. FOOT has retired from the firm of G. Treble, jun., Foot & Co., and the firm will henceforth be carried on under the old style of "George Treble & Son."

MR. JULIUS G. OHLENSCHLAGER, JUN., has been admitted a partner in the firm of Messrs. Ohlenschlager Brothers, merchants, of 2 Fowkes Buildings, Great Tower Street, E.C.

MESSRS. STEVENSON & HOWELL, manufacturing chemists, dealers in essential oils, &c., have removed from Addle Hill to larger premises at Standard Works, 95A Southwark Street, S.E.

WE notice that Mr. N. G. Wilcocks, of Bath, publishes a new series of testimonials as to the excellence of the soda-water machinery turned out at his works. Mr. Wilcocks states that he holds many more testimonials from his customers, which he proposes to bring before the trade in instalments.

MR. C. GOLDSTRAW, of Bilston, has disposed of his business in the manufacture of agricultural and veterinary preparations, cattle-foods, &c., to the Goldstraw Manufacturing Company, who will work it on a large scale.

A NEW illustrated catalogue of soda-water machinery and appliances has been just issued by Messrs. Hayward Tyler & Co., in which good descriptions of their various styles of machines are included.

MESSRS. MAY & BAKER publish in this issue an extended list of the chemical products they manufacture. We notice that no prices are quoted, which means, we presume, that orders are to be sent through wholesale houses.

MESSRS. ELLIMAN, SONS & Co., of Slough, have published an elegant little book with a series of lithographed hunting sketches by John Sturgess, representing "How my Hunter was Lamed," followed by a number of testimonials indicating how the hunter was, or might be, cured.

MESSRS. OSCAR SUTTON & Co., of Preston, have issued cards entitled "The Doctor's Orders," intended for sale by chemists at 1d. each. The cards are planned out for a week in diary form, but each day is ruled and indicated clearly for every half-hour from 12.30 A.M. to midnight.

MR. PETER TYRER, of Long Lane, Borough, the maker of the "Borough" ketchup, has published a calendar for 1886 printed in nineteen colours, and including a portrait of Ellen Terry, and will send a copy to any member of the trade who will apply for one.

ON January 1 Mr. Henry Wood retired from the partnership of Messrs. Aug. Faber & Co., drug-exporters, 60 Mark Lane, E.C., retaining the signature of the firm by procuration, while Messrs. Thomas Wood and Edmund Blum were admitted as partners.

DE VRY'S CINCHONA COMPANY have sold out their plant, stock, and the complete rights of manufacture of the "Extractum Cinchome Liquidum P.B. (De Vry)" to Messrs. Fletcher Fletcher & Stevenson, of the North London Chemical Works, Holloway, who will henceforth supply the article.

THE Crown Perfumery Company have introduced a bottle of smelling-salts of very agreeable perfume and permanent strength, which they call "Invigorating Lavender Salts"; and they are also pushing an excellent sixpenny tablet of unscented transparent soap.

THE partnership between Messrs. Thomas Henry Phillips and Mr. Harry Tom Phillips, drug and bark brokers, under the style of Jenkin & Phillips, 51 Lime Street, E.C., expired on the 1st inst. by effluxion of time. Mr. T. H. Phillips will continue the business as heretofore, while Mr. H. T. Phillips intends starting on his own account on June 1, until which time he will continue to assist in Mr. T. H. Phillips' office.

THE following may be added to the list of registered telegraphic addresses published in the Chemists' and Druggists' Diary, 1886:—

EVANS, GARD & Co., wholesale druggists, Exeter, **Gadd Exeter**.
 MARION & Co., photographic materials, 22 and 23 Soho Square, **Noiram London**.
 AINSWORTH & CLAYTON, manufacturing chemists, Blackburn, **Ainsworth Blackburn**.
 E. A. DE PAS & Co., agents Petrolina, 3 Coleman Street, E.C., **Edipus London**.
 NEW CARBOLIC SANITARY COMPANY, Hackney Downs Station, London, E., **Sootigine London**.

MESSRS. BARNETT & FOSTER have issued a new and very complete illustrated and descriptive catalogue of their soda-water machinery, ice-making machinery, and accessories, and a separate catalogue of their specialties for bottling beers, wines, and ciders. On a loose sheet they give drawings and arrangements for a large mineral-water factory, which are likely to be of considerable value to persons engaged in the trade, as well as to those thinking of embarking in it. In the general catalogue they show elevations of smaller factories, suitable for fitting-up in kitchens, cellars, &c.

* *

MR. F. H. BOWDEN, the proprietor of Henry's Indian Remedies, has removed his business depôt from Croydon to 43 King William Street, E.C. We notice that his "Thilum" is becoming quite a popular associate with cyclists, and many cycling authorities speak of it as of great value in the cases of abrasion, bruises, and sprains which are likely to follow "spills." For chilblains, too, it has acquired a special reputation.

* *

MR. J. CHRISTIAN, who has the sole right to manufacture marking ink under the style of "H. Bond's," and who has adopted the "Oak Tree" as a trade-mark, introduces convenient cases, called the "Oak Tree Combination," containing, neatly packed, a glass stoppered bottle of marking ink, a large stretcher (which is novel in respect of its wash-leather top), and either a glass marking pen or a couple of quills. The case containing the glass pen is better finished than the other, and sells for 2s. 6d.; the one with the quills for 1s. 6d.

* *

MR. HICKISSON, who never lets his marking-ink (the Daughter of the late John Bond's) business stagnate for want of fresh ideas, has introduced a new style of show-case in the form of a gilt-framed glass ease, which can be hung up like a show-card, and which is made prominent by exhibiting in the centre a portrait worked as a specimen of the ink. Customers can have Mr. Gladstone or Lord Beaconsfield, according to their preference, and we believe it is intended to supply some other portraits of a less decided political hue. Mr. Hickisson has also introduced a new form of supplying his ink, namely, in glass stoppered bottles, with a glass pen.

* *

ESTES' TURNED WOODEN BOXES.—We have recently received from Messrs. E. B. Estes & Sons, of New York, a packet containing a large variety of the turned wooden boxes of their manufacture. This firm produce turned wooden boxes on an immense scale. They own their own forests in the State of Maine, cut down their own timber, and carry out all the processes in their own factories. For many purposes turned wooden boxes are taking the place of chips, and wherever this can be done the advantage is very marked. Messrs. Kilner & Sons, of King's Cross, are agents for Messrs. Estes in Great Britain.

* *

A SAMPLE of ginger ale has come to us all the way from Dunedin, New Zealand. The makers are Messrs. Thomson & Co., of that city, and the beverage is put up in the usual champagne style. By some means, which we do not quite understand, Messrs. Thomson have very happily incorporated the old fermented ginger-beer flavour in as bright and sparkling a liquid as that of any of our best makers. That flavour would be likely to be very popular, but we have not previously met with it in ginger ales of this country. The liquid pours out with a fine head.

* *

100,000Z. EXPENDED IN ADVERTISEMENTS.—Mr. Rumney, who describes himself as "The World's Food Man," writes:—"Since September 17, 1864, I have drawn cheques to pay for advertisements and announcements of "Ridge's Food for Infants and Invalids" to the amount of 100,000Z. sterling in England alone; and at the present time (January, 1886) I am expending in advertisements alone 400Z. sterling per week, or at the rate of 20,000Z. sterling per annum."

MR. GEORGE HOYLES, of Holderness Road, Hull, sends us a sample of his "Cantharidine Balm," which is a very neatly-packed article, and a pleasant application for the hair. Mr. James Baynes, the Hull analyst, certifies to its harmlessness and value.

* *

MR. T. BROOKS, of Louth, who has for a long time advertised pharmaceutical formulæ in our pages, provides us with some of the compounds made from the formulæ which he sells. The samples before us of "Glycerine Cream" and "Trixy Bouquet" show that Mr. Brooks' formulæ for these preparations are certainly *secundum artem*.

* *

IN the advertisement of Messrs. Symington & Co.'s essence of coffee, inserted in THE CHEMIST AND DRUGGISTS' Diary, 1886, the London address of the firm (11 Cullum Street, E.C.) was accidentally omitted.

* *

WE are asked to explain that the engraving of dispensing-screen inserted in the advertisement of Messrs. R. Tomlinson & Son, of Birmingham, was not the one which corresponds with the description. Description and drawing are correctly inserted in the page which the firm occupy in this month's journal.

NEW COMPANIES.

Among the limited companies recently registered are the following:—

THE PETROLEUM ASSOCIATION.—Object, to promote the importation into the United Kingdom of petroleum and other products of the purest possible qualities, and to make and promote the making of regulations for the conduct of the trade in petroleum, &c. Every member undertakes to contribute to the assets of the Association, in the event of the same being wound up, a sum not exceeding 1Z. First subscribers:—A. Tremearne, South Sea House, Threadneedle Street, E.C.; George H. Frenck, merchant, Palmerston Buildings, Bishopsgate Street, E.C.; Edmund Dowling, 83 Cable Street, E.; Alfred Walton, oil merchant, 39 Borough High Street, S.E.; Thomas Hilton, 143 Great Suffolk Street, Southwark, S.E.; J. F. Stess, 101 Leadenhall Street, E.C.; Henry Wetty, merchant, 6 Great St. Helen's, E.C.; George Mordant, produce broker, 1A St. Helen's Place, E.C. The council to consist of not more than fifteen nor less than ten persons.

NEW CHLORALUM COMPANY (LIMITED).—Object, to acquire by purchase the patent rights, machinery, and all other properties connected with the business in chloralum, now carried on at 289 Kingsland Road, E., by Colonel Fyler, under the name of the "Chloralum Company," and to carry on the business of manufacturers and vendors, exporters and importers of, and dealers in, chloralum, or chloride of aluminium, and other disinfectants, chemicals, &c. Capital, 5,000Z., divided into 1,000Z. shares of 5Z. each. First subscribers:—Richard Wall, Beechmonk, Buckhurst Hill, Essex, 11 shares; Richard H. Wall, Blythe Steelworks, Bethnal Green, E., 11; James S. Battams, medical officer, Children's Hospital, Shadwell, E., 11; Henry Battams, accountant, 71 Eastcheap, E.C., 11; George Clark, accountant, 71 Eastcheap, E.C., 11; John B. Clark, Market Buildings, Mincing Lane, E.C., 11 shares.

F. C. MATTHEWS, SON & CO. (LIMITED).—Object, to acquire the business of manufacturers of and dealers in manures, seed-crushers, and refiners and manufacturers of linseed, cotton, and corn-feeding cakes, carried on by F. C. Matthews, Son & Co at Great Driffield, Yorkshire, and to carry on the same in all its branches, &c. Capital, 20,000Z., divided into 2,000 shares of 10Z. each.

ELTHORNE MINERAL-WATER COMPANY (LIMITED).—Object, to acquire the manufactory known as the Elthorne Mineral Waterworks, at Elthorne Road, Upper Holloway, and

the goodwill of the business now carried on there by Messrs. Berridge & Neale, and the stock-in-trade, plant, machinery, chattels, and effects belonging to the works, &c. Capital, 5,000*l.*, divided into 1,000*l.* shares of 5*l.* each.

W. B. FORDHAM & SONS (LIMITED).—Object, to undertake and carry on, as successors to W. B. Fordham & Sons, the business now carried on at the St. Pancras Emery and Glass Paper Works, York Road, King's Cross, N., and carry on in England or elsewhere the same business and that of glue merchants and Government and general contractors, &c. Capital, 60,000*l.*, divided into 60,000 shares of 1*l.* each. First subscribers are:—W. B. Fordham, Holly Mount, Hendon, 1 share; E. Fordham, merchant, Novar Villa, Caledonian Road, 1; J. T. Burden, traveller, Craster Road, Elm Park, Brixton, 1; Cuthbert Murray, 20 Portland Street, Commercial Road, E., 1; J. Fordham, manufacturer, 3 Thornhill Square, Barnsbury, N., 1; R. Axten, stockkeeper, 27 Harvest Road, Holloway, N., 1; R. Jackson, clerk, 73 York Road, Lambeth, 1; W. Chipperfield, 4 Highweek Road, South Tottenham, 1; William Bennett Fordham to be chairman of the Board.

SPRATTS PATENT (LIMITED).—Object, to undertake and carry on, as successors to Edward Wylam, Charles John Wylam, and George B. Batchelor, who are the founders of the company, the business carried on by them in partnership at Bermondsey and elsewhere, under the name of "Spratts Patent," and to acquire the business and carry on in Great Britain or elsewhere the business of dealers in food of all kinds, manufacturing chemists and druggists, and to manufacture and supply medicines and drugs for animals, &c. Capital, 200,000*l.*, divided into 40,000 shares of 5*l.* each. Edward Wylam, Charles J. Wylam, and George Becham Batchelor to be the first directors of the company.

BRIN BROS. (LIMITED): capital, 100,000*l.*, in 10*l.* shares.

H. F. VAN & CO. (LIMITED), aerated-water manufacturers capital, 20,000*l.*, in 2*l.* shares.

JEVES' SANITARY COMPOUNDS COMPANY (LIMITED) capital 25,000*l.*, in 5*l.* shares.

BANKRUPTCY.

GEORGE WILLIAM BENSON, 157A and 157B Great Portland Street, also of Cheapside and Chelsea, chemist and druggist.

At the London Bankruptcy Court on Wednesday an application was made to Mr. Registrar Giffard to confirm a scheme of arrangement come to by the creditors of this debtor, who failed a short time since with gross liabilities 614*l.* 14*s.* 3*d.*, of which 608*l.* 9*s.* 3*d.* is expected to rank against assets 129*l.* 15*s.* 3*d.*, showing a deficiency of 478*l.* 14*s.* The failure is attributed to establishing and commencing a business, which he started on the understanding that he would obtain further advances from his father. At the first meeting resolutions were passed accepting a composition of 5*s.* in the pound, payable within fourteen days after the confirmation by the Court. The Official Receiver having reported in favour, his Honour now ordered the scheme to be confirmed.

THE GOVERNMENT PUBLIC GARDENS OF JAMAICA, which have been for some years conducted by Mr. D. Morris, M.A., F.G.S., are being investigated by a Select Committee with a view to reduce the expenses of the Government. There is a probability that the gardens will be handed over to the town of Kingston, instead of being retained as a Government department. This will probably seriously depreciate their efficiency. The experimental cultivation of cinchona in the gardens was commenced in 1863, and since then large numbers of seedlings, seeds, and plants have been distributed through the West Indies. That the West Indian islands are not as prosperous as they should be, considering their magnificent climatic advantages, is undoubted; and it is hardly the way to promote such prosperity to cripple the means whereby those advantages can be scientifically utilised. It is stated that the post of Assistant-Director of Kew Gardens has been offered to Mr. Morris.



THE TITLE "FRUIT SALT."

IN the Supreme Court of New South Wales, the case of *Eno v. Hogg*, came before their Honours the Chief Justice, Mr. Justice Faneett, and Mr. Justice Innes. The case lasted from November 23 to November 25. The defendant Hogg appealed from a decree of Sir W. Manning, whereby he was perpetually restrained from selling his manufacture known as Parisian Fruit Salt, on the ground that the trade-mark used by him was a fraudulent imitation of the plaintiff's trade-mark, which was registered in this colony in 1881. The defence in the Court below was (1) that the term "fruit salt" was merely descriptive, and therefore incapable of registration: (2) that the term "fruit salt," being used here in 1880, and before Eno's Fruit Salt was registered in this colony, the plaintiff had no better right to an exclusive use of the term than any member of the public.

Mr. Darley, Q.C., and Mr. Walker, instructed by Mr. Ernest Smith, were for the appellant.

Mr. M. H. Stephen, Q.C., and Dr. Donovan, instructed by Mr. De Lissa, appeared for the respondent.

The grounds of appeal were, (1) That there was no evidence of fraudulent intent. (2) The term "fruit salt" was *publici juris*. (3) The term was in general use before the plaintiff's registration.

The Primary Judge's decree was "that the defendant be perpetually restrained from selling his manufacture with the words 'fruit salt' or any colourable approach to that term or the other term used by the plaintiff, or either of them. The defendant must pay all costs of suit. By the consent of parties I assess the damages at 100*l.*, payable within three weeks."

Mr. Darley, Q.C., for the appellant, contended that the term "fruit salt" had become common property here before it was registered. Mr. Eno had sent out fruit salt years before he registered it here. Injunctions had been granted for imitating Eno's label, but the defendant's label was quite distinct. No one could be deceived by the "Parisian Fruit Salt." Section 7 of the Trade Marks Act (28 Vic., No. 9) provided against persons using trade-marks so as to deceive the public, but gave no patent right. The test case on the question of *publici juris* was *re Heaton's Trade Mark* (L. R. 27, Ch. Div., 570). He also cited *The Leather Cloth Company v. The American Leather Cloth Company* (11 H. of L. Cases, 523); the *Linoleum case* (L. R. 7, Ch. Div., 834); and *re Palmer's Trade Mark* (L. R. 24, Ch. Div., 504), in which the Court of Appeal held that the term "Braided Fixed Stars," as applied to cigar lights, was a merely descriptive term, and ordered the trade-mark to be expunged.

Mr. Walker followed on the same side. "Any rights the plaintiff might have had he had lost by his *laches* in not registering here sooner. He cited *Leonard and Ellis' Trade Mark* (L. R. 26, Ch. Div., 288).

Mr. Stephen, Q.C., for the respondent, said the appellants were mixing up two arguments—1. That it was descriptive at first, and so incapable of registration. 2. That it has since become *publici juris*. The whole of the evidence taken on commission in England showed that it was descriptive of nothing. The real question was, whether it had become descriptive. A few paltry sales of under 5*l.* could not make it *publici juris*.

The Chief Justice: The question is whether what the appellant has done is likely to deceive the public.

Mr. Stephen: It was not a mere question of similarity. Mr. Eno's case was that he had an absolute right of property in the phrase "fruit salt."

The Chief Justice: The right to a trade-mark is simply a right to prevent a person from being cheated by having other people's goods passed off as his.

Mr. Stephen cited the following cases:—*Rogers v. Noel* (5, C.B., 12); *Edelston v. Edelston* (1, De G., J. and S., p. 199); *Ransome v. Graham* (47, L. J., N. S., 220; 51 L. J. Ch.); *Ford v. Foster* (7, Ch. App., at p. 625); *Wotherspoon v. Currie* (L. R. 5, H. L., 508); *Seixo v. Provezende* (L. R., 1, Ch. 192); *Johnson v. Orr-Ewing* (L. R. 7, App. Cas., 219; 51, L. J., Ch. 797); "*Singer*" *Machine Company v. Wilson* (L. R. 3, App. Cas. 376).

Dr. Donovan followed. Seeing that Eno's Fruit Salt was so familiar, how was it possible that the mere adoption of this name by a few people for a few months could be said to deprive Eno of his exclusive right to that name? If at common law Eno had acquired a right by long user, could it be said that his case was weakened by registration?

Mr. Darley, Q.C., in reply, referred to *Sebastian on Trade Marks*, p. 119 (2nd edit.) and cited *Cope v. Evans* (L. R. 18, Eq. 138). There was no evidence to show that Hogg, by using the words "fruit salt," meant to pass off his goods as those of Eno. If he had, he would have made the label more like Eno's. There was no evidence that any person had been deceived, or was likely to be deceived.

The Chief Justice, in delivering judgment, said he did not know that anything turned upon the point as to the registration of the plaintiff's trade-mark in the colony. Whilst manufacturers of articles of trade might use special marks so as to distinguish them from others before the public, and denote that their goods were of superior quality and had obtained particular merit, these marks or names could not consist of such common descriptive words as "flour," "ale," &c. Outside these and other well-known words, a manufacturer might call his commodities anything he liked, and use the name he adopted as a trade-mark. The evidence in this case was that, until the plaintiff made his commodity, there was no such article known to commerce as "Fruit Salt," although it did not appear whether he was the first person to make the particular combination. The evidence showed that the plaintiff spent as much as 14,000*l.* in advertising in one year, and this fact alone showed that his commodity had obtained a reputation. Apart altogether from the Trade Marks Act, the plaintiff was at liberty to use exclusively the particular designation "Fruit Salt" which he had adopted, seeing that he was the first to put it on the market. Hence the plaintiff had a right to appeal to any Court of Justice in the British dominions to prevent the use of this title so as to deceive the public. He could have exercised that right the very first day an attempt was made to palm off an article as his. The Act did not extend the rights of the plaintiff and all other persons similarly situated before it passed, but imposed certain penalties for the forging of trade-marks, and made any violation of it a misdemeanour, not punishable by imprisonment, but by penalty. The Act, in fact, left the rights of the first user just where they were. Of course, the plaintiff had no exclusive right to manufacture the commodity unless it were patented, his only protection being as to the name he had adopted. Any person who manufactured the same commodity must place it on the market in such a way that the public will not be deceived into believing that it is the manufacture of the first user. It was not necessary that there should be a similarity of labels in order to make out the plaintiff's case, because an intention to deceive the public could be made out in other ways. He had felt some difficulty as to this part of the case, but having gone carefully through the cases that had been cited, he had come to the conclusion that, although the label of the defendant was not very much like the plaintiff's, still certain material words were common to both, and plaintiff must succeed. The cases went the length of showing that, notwithstanding dissimilarity in the label, still if some term, which was descriptive of the article, was made use of, then that was a matter upon which the Court would act. He had had great doubt during the argument as to this part of the case, seeing that there had been no attempt on the part of the defendant to palm off his goods as the plaintiff's; but the authorities were irresistible on that point, especially the *Glenfield starch case* (*Wotherspoon v. Curry*, 5 E. and L. App. Cases), in which the only thing that could be said to be a piracy of the original label was the use of the word *Glenfield*. They might not be satisfied with the authorities nor with the reasoning they contained: but being those of the Appellate Court and the House of Lords, they were bound by them. The evidence did not show that there

had been any extensive use of the defendant's preparation as it had not been sold for more than a year. Even if it were eighteen months or two years, they had to bear in mind that the plaintiff lived in another part of the world. He was of opinion that the decree of his Honour the Primary Judge should be upheld, and the appeal dismissed with costs.

Mr. Justice Fauceett concurred in what had fallen from his Honour the Chief Justice. There was overwhelming proof that the plaintiff had established his right to use the trade-mark "Fruit Salt" before defendant adopted it. It struck him on the point of *publici juris*, that there was no evidence before the Court, nor did anyone seem to know what were the ingredients of the plaintiff's preparation. It had been proved that Simmonds, Lavers, and Davis only manufactured an article they called fruit salt for a short time, and when they were eliminated they only had the defendant manufacturing his preparation for twelve months. This showed that there was no ground for saying that the term "Fruit Salt" had become known and was in general use before the plaintiff's goods became known here.

Mr. Justice Innes concurred with the judgments of his colleagues.

The appeal was dismissed with costs.

THE MEDICINE STAMP ACT.

At the Croydon Borough Police Court, on December 23, Stephen Jarrett, carrying on the business of a herbalist, at 3 Market Place, Surrey Street, Croydon, was summoned by the Commissioners of Inland Revenue for selling certain medicines without paying duty on the same, contrary to the statute. Mr. Alpe, barrister, appeared for the prosecution, and said there were four informations against the defendant, each for a penalty of 10*l.* An officer of Inland Revenue purchased at the defendant's shop a bottle of neuralgic mixture, which was described as being good for sciatica and other complaints, and on the same day a packet of worm powders, which were described as a never-failing remedy for tape-worms. Both these articles were liable to duty. On another day a second bottle of neuralgic mixture was bought, and also a box of "Jarrett's compound dandelion pills." All pills that were held up and recommended in any way as specifics to relieve any disorder were amenable to the Stamp Act.

Mr. Joseph Todd, an Inland Revenue officer, deposed to purchasing the bottle of neuralgic mixture with a label upon it, now produced, and the packet of worm powders in the wrapper, also produced. He subsequently purchased a box of pills and another bottle of neuralgic mixture. Hand-bills recommending the articles in question were given him by the girl who served him. He paid 1*s.* for each bottle. The wrappers were not stamped according to law.

Mr. Dennis, who appeared for the defendant, said the facts were not in dispute, but the Act under which these proceedings were taken was a very peculiar one. His client did not profess to practise any particular art in compounding the neuralgic mixture, which was one simple thing diluted with water and offered to the public as a so-called specific, and he held that no Government duty was applicable to any medicine compounded as that was, unless the vendor had at the time letters patent for the exclusive sale of that particular compound. That case was on all fours with the question that was raised respecting Lamplough's Pyretic Saline, in regard to which it was held by the Judges that where there were no letters patent to protect a medicine no stamp was necessary, although it was called a nostrum for the benefit of diseases of the human body. He contended that Jarrett was entitled to make up a simple compound and sell it without asking for protection by letters patent. This was not a case of selling patent medicine, for if he (Mr. Dennis) chose he could set up in business next door to him and sell the very same article. He would point out that Jarrett had no proprietary right. Of course, if their law was wrong, his client had erred in ignorance of the law. He knew that was no excuse, for every person was supposed to know every Act of Parliament, which was a magnificent fiction.

Mr. Alpe, in addressing the Bench, said the defence that had been raised was a very ingenious one, but it was wrong in point of law altogether. As a matter of fact, there was no such thing existing as letters patent for any medicine. All medicines held out to the public as nostrums were liable

to duty. The case of "The Attorney-General v. Lamplough" was a question whether mineral waters were exempt, and that point was argued out. In reply to the Bench, the learned counsel said there should have been a 1*d.* stamp on each bottle and box. He believed the defendant had not been summoned before.

The Mayor said the case had been thoroughly proved, and no doubt all those articles were amenable to duty. The Bench, as public authorities, were much indebted to the Inland Revenue authorities for taking the matter up, for the medicines were dispensed to the poor who could not protect themselves. Those noxious, nauseous medicines were about as deleterious as they could be. He fined the defendant 1*l.* and 13*s.* costs on each summons—in all, 6*l.* 12*s.*



TOMLINSON'S BUTTER COLOUR.

TOMLINSON & HAYWARD have done a service to dairy-farmers in devising so elegant a preparation as the one before us. The special claims which they make for it are that it contains neither alkali nor acid, and does not colour the butter-milk. Our examination of the colouring shows that the makers have secured these *desiderata* in a rational way, namely, by taking advantage of the fact that the colouring-matter of annatto is a resin, and, instead of dissolving it out with an alkali, as is generally done, they use a simple and innoxious solvent which brings the resin into solution in its natural state, so that the whole of the colouring put into the cream goes to the butter, and the injurious effect of alkali on the yield of butter is done away with. These features are important, and will be appreciated by dairymen. The colour is bright, sweet, and permanent, and is put up in the firm's quiet but well-known style, to retail at a shilling. We are often asked for a good golden colour for pomades. This is just the article that is wanted.

PEPTOLEINE.

UNDER this name Messrs. Burgoyne, Burbidges, Cyriax & Farries send out a new emulsion of cod-liver oil, manufactured on a principle devised by Peter Gowan, M.D., B.Sc. Edin. The emulsion has some of the ordinary features, such as an almond flavour and 50 per cent. of the oil, but in other respects it is unique. The manufacturers claim for it that it is the most perfect emulsion hitherto produced, and certainly we can say that there has been none better. The emulsion, which has the consistency of a rich cream, has defied our efforts to unmix it, and this we believe to be a valuable property of such preparations. It mixes with water and aqueous liquids as easily and as readily as spirit. The flavour of almonds, which to some is abhorrent, is agreeably relieved by the acidulous taste of the tonic ingredients of the preparation. It is not our province to speak of the therapeutic value of such preparations (we observe that on this point "Peptoleine" has been very favourably spoken of elsewhere, and Dr. Gowan's reputation is alone a guarantee), but we know that there is a large field for them, and that they are in demand, especially at this season. The peculiar merits of Peptoleine are certain to make it popular wherever it is introduced; it is got up in a modestly attractive style in 8 oz. oval bottles, which retail at 2*s.* 9*d.* If the proprietors are amenable to a hint, we would suggest that the band over the cork should be abandoned; the remains of it give an unpleasant appearance when the preparation is in use.

BREIDENBACH'S LOCK-STOPPER SMELLING SALTS.

MESSRS. BREIDENBACH & Co., of New Bond Street, have patented a form of stoppered bottle, shown in the engraving,



for smelling salts, which has the advantage that by a slight turn of the stopper it is irremovable, though it is quite easily taken out by a further turn. The strength of the salts is retained much longer by such an arrangement. The shoulders of the bottles are made with gold, silver, or plated mounts.

LYNCH'S MAGNETIC FLESH-BRUSH.

FOLLOWING the magnetic hair-brush which Messrs. Lynch & Co. introduced a few months since, we have now from the same firm an electro-magnetic flesh-brush, intended for use in cases of rheumatism, sciatica, lumbago, and such-like pains. The brush is a very full one, and yields abundant friction without scratching. It may be used either dry or as a bath-brush. Its magnetic properties are proved by a little compass which is enclosed in each box containing the flesh-brush.

ASPINALL'S NON-POISONOUS WASHABLE WATER-PAINTS.

MESSRS. ASPINALL, ASPINALL & Co., of Hollydale Works, Peckham, are bringing before chemists a series of paints in self-opening tins, which have several important characteristics, some of which are novel. In the first place these paints are non-poisonous, and they are to a considerable degree free from smell. Their special peculiarity, however, is that they can be reduced by water, but that when they become hard again they are no longer soluble; surfaces painted with them can therefore be washed. If reduced by water a flat surface is obtained, while a glossy surface is given when the paint is thinned with oil. This series of paints seems well suited for sale by druggists.

HYDROLEINE.

THIS name is applied to a series of articles for the laundry, and for disinfecting purposes manufactured by F. J. Harrison & Co. (Limited), Leicester. These comprise a new soap-powder, and a sanitary disinfecting powder, and, what seems especially useful, a carbolic soap-powder, which, for washing bedroom-floors, disinfecting clothing, washing dogs, and for all purposes where the application of a disinfectant is required, seems well suited. These articles are got up in showy style, and at cheap prices. The carbolic soap-powder we refer to sells in a bulky tin at 6*d.*

"OPORICOS CHAMPAGNE."

MR. B. ROBINSON, of Pendleton, who has to some extent diverged from pharmacy proper to the manufacture of British wines, in which business he seems to have made a great success, has introduced a novelty among these in his "Oporicos" champagne, which is made from British grapes and other fruits. This has all the outer characteristics of the monarch of wines, barring the price. It has a distinct flavour, which distinguishes it from the gooseberry imitations, and which seems to be due to the fruits used. It makes a good addition to a stock of British wines.

Scientific Notes:

LANOLIN—A NEW OINTMENT BASIS.

DR. OSCAR LIEBREICH read a paper on "Lanolin" before the Berlin Medical Society on October 28 (see the *Berliner Klin. Wochens.*, No. 47). This substance is a mixture of cholesterol fat (from keratin-holding tissues, such as sheep's wool in particular) and water. The pure cholesterol fat stands, as Berthelot has said, between a resin and a fat, but is capable of taking up its bulk of water. It is perfectly neutral, and possesses properties which are not shared by the ordinary fats, nor by vaseline. In contrast with ordinary fats, lanolin with difficulty decomposes, and, which is its chief property therapeutically, it is extremely readily absorbed by the skin. It is, in fact, the natural fat of the skin, and of epidermic tissues generally, such as hair, hoofs of horses, feathers, &c., from all of which it has been obtained. As a proof of this high power of being absorbed, a 5-per-cent. carbolic-acid ointment made up with lanolin produced a feeling of numbness without irritation in the hand in from one to two minutes after being rubbed in. The presence of cholesterolin fats is easily ascertained by Liebmenn's cholesterol test. The fat to be tested is dissolved in acetic anhydride (not glacial acetic acid). The solution gives a rose coloration, passing very quickly into dark blue and green when concentrated sulphuric acid is added. Glycerine fats do not give this reaction. The advantage of lanolin over vaselin and such paraffin derivatives consists in its ready absorbability. Vaseline, as is well known, greatly hinders the absorption of therapeutical agents. It is an advantage to add 5 or 10 per cent. of ordinary fat or of glycerine to lanolin, so that the unctuous character may be better preserved.—*Brit. Med. Journ.*

PEPPER ADULTERATION.

A. HILGER, in the *Archiv. der Pharmacie*, states that adulteration of ground pepper by means of broken pepper has lately been very frequent. A sample of broken pepper was taken, and on careful inspection was found to contain an admixture of broken pericarps of chillies. The microscope proved that pressed seeds of the oil palm (*Elæis guineensis*, Jacq.) were also present. Complete analysis showed the so-called "broken pepper" to consist of—

	Per Cent.
Shells of pepper	50
Flour of oil-palm seeds	30
Dust of pepper	15
Mineral substances	4
Pericarps of chillies	1

DEPOSIT IN ETHEREAL TINCTURE OF LOBELIA.

MR. W. S. TURNBULL, in a paper contributed to the Edinburgh Chemists' Assistants' Association, gives the results of an examination of this deposit. The deposit is greenish yellow, and is soluble in ether and alcohol, but insoluble in water (nearly), rectified spirit, and absolute alcohol. Boiled with dilute sulphuric acid it reduces Fehling's solution, but it gives no precipitate with Thresh's alkaloidal reagent. From

these results, and the fact that it is seen under the microscope to be composed of granular tufted crystals, he concludes that it is *lobelacrin*, the substance to which lobelia owes its taste. Being insoluble in rectified spirit, it is deposited from the ethereal tincture as the ether evaporates, therefore the tincture should be kept in well-closed bottles. In the discussion which followed the paper, Mr. William Duncan stated that he had examined another deposit, from which he had separated acicular and colourless crystals, which he determined to be *lobelic acid*. He inferred from this that the *lobelacrin* undergoes decomposition, since *lobelic acid* is one of its segregates.

FEHLING'S SOLUTION.*

M. SCHMIEDEBERG brought before the Congress of Naturalists at Strasburg, held last September, a new form of Fehling's solution, designed to render it more permanent. His formula is to dissolve 32.623 grammes of crystallised copper sulphate in 200 c.c. of water; to dissolve separately 15 grammes of very pure mannite in 100 c.c. of water; to mix the solutions, and to add 480 c.c. of soda lye 1.145, and sufficient water to make up 1 litre. The modification consists in the substitution of mannite for Rochelle salt.

HYPOXONE.†

THIS name is suggested by Dr. Dujardin-Beaumetz for a new hypnotic which he has described to the French Academy of Medicine. Chemically the substance is acetaphenone, or methyl-phenyl-acetone, or methyl-benzoyl. It belongs to the aromatic series, and its formula, according to Wurtz, is $C_8H_9CO_2CH_3$. It was obtained by Friedel by the action of chloride of benzoyl on zinc methyl, or by distilling a mixture of benzoate and acetate of calcium. It is a colourless liquid, boiling at $210^{\circ}C$. It is volatile, with a very persistent odour, something like bitter almonds. It solidifies at 4° to $5^{\circ}C$. Its specific gravity is 1060; it is insoluble in water or glycerine, but very soluble in spirit, ether, chloroform, and benzine. Its reaction with litmus-paper is neutral, and it leaves a greasy stain on paper.

Dr. Dujardin-Beaumetz states that in doses of 4 to 16 drops it always produces four to six hours of refreshing sleep. Other doctors have also administered it with similar results.

M. Vigier suggests as a convenient form for administration the solution of 1 drop in 1 gramme of alcohol with a little syrup.

M. Limousin, however, advocates in preference 4 drops (=10 centigrammes) in a little sweet oil of almonds in a capsule. The oil, he finds, dissolves it perfectly.

ARTIFICIAL *v.* NATURAL HONEY.—We take the following from the *Schweiz. Bienen Zeitung*:—A very simple test for honey was recently published, viz., to dissolve it in a little water and then add alcohol. Natural honey will not change; the artificial product, on the other hand, clouds the water and finally deposits a powdery sediment. The basis of this test is the assumption that glucose or syrup of starch contains besides the so-called sugar of starch a resinous principle called "Dextrine," or "Starch-gum," dissolving in water but *not* in alcohol, and which, consequently, is separated from the aqueous solution by the addition of alcohol to the latter. It is obvious, however, that this test holds good only upon the following conditions:—(1) That all glucose contains dextrine; (2) that all manufacturers of artificial honey employ glucose in their process; (3) that the reagent employed in the test should never act upon bees' honey in a similar manner as upon artificial honey. In order to ascertain how far these conditions may be depended upon, experiments were made with six samples of artificial and six of natural honey, every sample emanating from a different source, with the result that all samples of artificial honey were found to contain dextrine, and that the experiments upon bees' honey did not in any instance cause a reaction, which might have been mistaken for that of natural honey. To test the suspected samples for the presence of dextrine, dissolve 1 teaspoonful of honey with 2 of water in a tumbler; then fill the tumbler half-full with strong

* Journ. de Pharm. d'Als.-Lorr.

† Journ. de Pharm. et de Chim., January 1, 1886.

alcohol; continue stirring during the entire process. Artificial honey will turn into a milk-white perturbed liquid, and in a few hours deposite a tough, slimy residue at the bottom of the tumbler. Genuine bees' honey should either remain quite clear, or give a flaky, yellowish sediment of albumen, the latter being especially the case with the commoner kinds of genuine honey, now frequently placed on the market, such as Havanna, Spanish, &c.; but it is impossible to mistake this flaky sediment for that of artificial honey. The following tests are also recommendable:—Dissolve 30 grs. of the suspected sample with 3 c.cm. water in a test-glass, heat, then add 20 c.cm. alcohol and shake; the degree of adulteration with dextrine may be gauged by the greater or lesser intensity of the perturbation which follows. Or, dissolve 10.0 grs. of the sample in 50 c.cm. of distilled water and filter the solution. The test-glass is then half filled with the strained liquid and 12 drops of tincture of iodine (2 per cent. solution) added by means of a glass-tube. Turn over the test-glass a few times between thumb and forefinger. Artificial honey will assume a reddish-brown, natural honey a pale yellow colour.

THE DETERMINATION OF GLYCERINE.

MESSRS. WILLIAM FOX and J. A. Wanklyn (*Chem. News*), having found the ordinary methods of glycerine determinations to be inaccurate, worked out the method given below, and which is based on the fact that glycerine, oxidised with permanganate of potash in a strongly alkaline solution, gives oxalic acid according to the equation—



The oxalate can be precipitated by a lime salt, and the amount of oxalic acid determined, and the equivalent quantity of glycerine calculated therefrom.

Their process is as follows:—

An aqueous solution of glycerine (which should not contain more than 0.25 gramme $C_3H_5O_2$) is made strongly alkaline by adding 5.0 grammes of solid caustic potash; powdered permanganate of potash is then gradually added until the solution is of a permanent pink colour; the solution is kept at boiling-point for half an hour, and then the excess of $K_2Mn_2O_8$ decomposed with sulphurous acid, either in solution or as gas. The solution, which should now be colourless, is filtered from the precipitated oxide of manganese, and made acid with acetic acid and boiled; a lime salt is added, and the resulting oxalate collected on a filter and thoroughly washed with boiling water. As the precipitate is not pure oxalate of lime, the oxalic acid in the lime salt is estimated by titrating with standard $K_2Mn_2O_8$ in the usual way; with a moderate amount of care this process is very accurate; the difference in several experiments should be under a half per cent.

In the saponification of fats in which it is proposed to estimate the glycerine, care should be taken to have the whole of the alcohol driven off, as dilute alcohol treated with alkaline permanganate gives oxalic acid. It may be mentioned that the acids of the acetic series do not oxidise to oxalic acid with alkaline permanganate, whilst those acids of the acrylic series do.

Personalities.

MR. SIDNEY PLOWMAN, who has been one of the examiners of the Pharmaceutical Society, and is still one of the honorary secretaries of the British Pharmaceutical Conference, has lately passed the necessary examinations, and been admitted a Fellow of the Royal College of Surgeons.

MR. THOMAS KAY, chemist, Stockport, has been appointed by the Lord Chancellor on the Commission of the Peace for the borough.

MR. ALFRED H. MASON, F.C.S., has been elected an honorary member of the Pharmaceutical Association of the Province of Quebec, in acknowledgment of his services to pharmaceutical science.

THE will of the late Mr. Henry Clay Gallup (the proprietor of Floriline, &c.), has been proved, the personalty being sworn at over 130,000/. With the exception of a few trifling legacies to friends, Mr. Gallup leaves the whole on trust to his son.

How an eminent name may get unrecognisable is shown in a French journal (the *Union Pharmaceutique*) before us. That publication quotes from the *Journ. de Pharm. d'Univers* a translation from the *Seminario Pharmaceutico* of Madrid, which seems to have got its information from us, of a paper on "Oxalic Ether," which Dr. B. W. Richardson originally wrote in the *Asclepiad*. The author's name has become by this time "le Dr. W. Tohardzon."



[The following list has been compiled expressly for THE CHEMIST AND DRUGGIST by G. F. Redfern, Patent Agent, 4 South Street, Finsbury, London, and at Paris and Brussels.]

Applications for Letters Patent:—

Bottle for Lotions, &c.—14,990.—December 7, 1885.—E. Kent, London. Bottle for lotions, hair-washes, &c.

Bottle-openers for Internally-stoppered Bottles.—15,121.—December 9, 1885.—H. W. Dover, London.

Bottles.—14,888.—December 4, 1885.—G. Quarrie, Liverpool.—15,861.—December 24, 1885.—J. Deeks, London. Bottles for containing aerated liquids.—15,924.—December 28, 1885.—T. Hill, London. Flexible washers for aerated-water bottles.—15,934.—December 28, 1885.—F. J. B. Raken, London. Syphon-bottle for aerated beverages, preserving the liquid from all contact with metals.

Bottle-stoppers—14,755.—December 1, 1885.—W. Samson, Glasgow. For bottles containing aerated waters or liquids.—14,929.—December 5, 1885.—C. Johnson, Sheffield.—14,942.—December 5, 1885.—T. Turner, London.—15,055.—March 24, 1885.—A. R. Stocker, London. Perforated sprinkling and pouring stoppers.—15,415.—December 15, 1885.—S. B. Opdyke, London.—15,419.—December 15, 1885.—E. P. Alexander.—A communication from W. R. Clough, United States. Capsule-stoppers.—15,476.—December 16, 1885.—W. Samson and J. Burke, London. Bottle-capsules.—15,607.—December 18, 1885.—G. F. Redfern, London.—A communication from E. Bousquet, France.—Improvements in the manufacture or treatment of cork stoppers and cork.—15,757.—December 22, 1885.—C. Wells, London. Improvements in stoppering bottles and jars.

Bottling-apparatus.—14,789.—December 2, 1885.—F. G. Riley, London. For aerated liquids.—15,405.—December 15, 1885.—H. W. Stevens, Colchester. For aerated liquids.—15,786.—December 23, 1885.—T. H. Hayes, Manchester. For filling and corking aerated and other liquids.

Chemical Balances.—15,678.—W. E. Heys, Manchester.—A communication from E. Becker, United States.

Colouring-matters.—14,962.—December 5, 1885.—H. H. Lake, London.—A communication from Wirth & Co., agents of A. Leonhardt & Co., Germany.—15,337.—December 14, 1885.—H. Hassencamp and F. vorm. F. Bayer & Co., London.—15,716.—December 21, 1885.—C. Rudolph and O. Gürke, London.—15,775.—December 22, 1885.—C. H. Lake, London.—A communication from the Schoellkopf Aniline and Chemical Company, United States.—15,781.—December 22, 1885.—H. H. Lake, London.—A communication from the Schoellkopf Aniline and Chemical Company, United States.—15,381.—December 15, 1885.—J. Y. Johnson, London.—A communication from F. von H. Nachfolger, Germany. Improvements in the production of azo-dyes.—15,632.—December 19, 1885.—W. Smith, London. A new vegetable blue dye.—15,296.—December 12, 1885.—P. Jensen, London.—A communication from the Actiengesellschaft für Anilinfabrikation, Germany. Process for the production of mixed azo colours.

Cork-extractor.—15,015.—December 7, 1885.—E. Woodham and P. Ockenden, London.—15,503.—December 17, 1885.—R. L. Hickes, London.

Cream for Toilet Purposes.—15,943.—December 28, 1885.—P. Jensen, London.—A communication from S. Winkler, Hungary.

Disinfectant.—15,868.—December 24, 1885.—F. Candy and W. Frere, London. An improved closet-pan disinfectant.

Distilling Ammonia.—15,836.—December 24, 1885.—N. M. Henderson, Broxburn. Apparatus for.

Filtering Liquids.—15,123.—December 9, 1885.—F. Heyland, Italy. Filtering and decanting liquids by cellulose balls and syphon filters.

Fuller's Earth.—15,947.—December 28, 1885.—F. Candy, London. Improvements in the preparation of.

Glasses.—14,754.—December 1, 1885.—C. Melin, London. An improved construction of graduated glasses, vases, or measures.

Gunpowder.—15,129.—December 9, 1885.—E. Schultze, London. Improvements in the manufacture.—15,696.—December 21, 1885.—S. H. Emmens, London. Improvements in smokeless gunpowders.

Mixing Liquid Disinfectants.—15,092.—December 9, 1885.—W. J. Bishop, London. Automatic apparatus for mixing liquid disinfectants with water or without spray.

Ointments.—15,336.—December 15, 1885.—M. Rook, London.—15,595.—December 18, 1885.—D. W. Williams, London.—15,766.—December 22, 1885.—R. E. R. James, London. For the cure of diseases of the breast.

Preserving Condensed Milk.—15,387.—December 15, 1885.—J. Hooker, London. Improvements in the preservation of condensed milk, and of milk either condensed or in the natural state in admixture with other alimentary matters and medicinal matters, or mixtures or preparations of such matters.

Purifying Water.—15,864.—December 24, 1885.—F. R. Conder, London. Improvements in the use and application of iron compounds, such as sulphate of iron, for the purification of water, and for other sanitary and curative purposes.

Separating Substances from Phosphate of Lime.—15,664.—December 19, 1885.—T. R. Shillito, London.—A communication from E. Hänisch and M. Schroeder, Prussia.

Soothing Apparatus.—15,552.—December 18, 1885.—W. Morris, Birmingham. Improvements in apparatus for soothing and minding restless infants.

Stretcher.—15,432.—December 16, 1885.—R. Stevens, Edinburgh. A stretcher for surgical purposes.

Surgical Apparatus.—15,588.—December 18, 1885.—M. P. Browne, London. For administering injections.

Tooth-brush Stand.—15,653.—December 19, 1885.—J. Needham and B. Lewis, London. A hygienic tooth-brush stand.

Specifications published during the month:—

Postage 1*d.* each extra.

1884.

15,217. E. Golonya. Treatment, &c., of vegetable excrecences. 6*d.*

16,046. J. Young. Cyanogen compounds. 6*d.*

1885.

265. J. Lyon and T. Critchley. Syruping, &c., aerated waters. 8*d.*

497. J. Robinson. Obtaining sulphur from spent oxides of iron, &c. 6*d.*

589. J. K. Rogers and A. Applegate. Brushes for cleaning bellied bottles, &c. 6*d.*

629. H. Wagener and A. Müller. Purifying, &c., sewage. 8*d.*

757. E. F. Frachsel. Purifying hydrate of strontium. 4*d.*

800. H. W. Deacon and others. Treating sulphides in alkaline solutions by electrolysis. 6*d.*

1,031. E. Von Pittner. Extraction of magnesium. 4*d.*

1,097. J. Cort and S. Stevenson. Cork-cutting machines. 8*d.*

1,239. M. & A. Mackay. Wood stoppers. 6*d.*

1,272. R. Holmes. Stopper for bottles, &c. 8*d.*

1,328. H. Agar. Necking-tool for working bottle-necks. 8*d.*

2,193. F. Barbe. Solidification of phosphoric acid for manure. 4*d.*

2,305. A. M. Clark. Abdominal belt. 6*d.*

4,517. G. Wilson. Water-filters. 8*d.*

6,055. W. B. G. Bennett. Precipitants for the treatment of sewage, &c. 6*d.*

6,644. H. Precht. Obtaining carbonate of potash. 6*d.*

7,176. S. Nash. Medicinal preparation for rheumatism. 4*d.*

8,084. S. H. James. Treatment of sewage. 8*d.*

8,838. W. P. Thompson. Obtaining silicates of the alkalies and alkaline earths from the corresponding sulphates, &c. 8*d.*

12,344. J. Webster. Utilising waste liquors, &c., containing calcium chloride. 4*d.*

12,411. E. & M. E. De Tomanzie. Trusses for hernia. 6*d.*

12,489. F. W. Tornberg. Revolving tooth-brush. 6*d.*

Miscellaneous.

UNCLAIMED DOGS at the Home in Battersea are killed painlessly by being sent to sleep in an atmosphere of chlorine, bisulphide of carbon, and carbonic oxide.

A NEW INVENTION IN ELECTRIC LIGHTING.—Mr. Max Muthel has patented in Germany an incandescent lamp which possesses the advantage of requiring no vacuum in the globe. He has, it is reported, very ingeniously overcome one danger that experiments of this kind have hitherto presented, and that is the fusion of the incandescent wire. The wire used by him consists of a mixture of bodies that are conductors and non-conductors of electricity. He takes magnesia, silicate of magnesia, &c., and porcelain clay, and forms a fine thread of them, which he heats to incandescence and saturates with a solution of platino-iridium salts, and afterwards raises several times to incandescence in order to reduce the absorbed salts to a metallic state. Instead of the foregoing mixture, filaments of clay may be taken and saturated with a solution of a metallic salt, which is then reduced to a metallic state through incandescence and the use of oil of lavender or some other organic substance, or through an electric current. With wires thus prepared fusion is absolutely overcome, the presence of the non-conducting substances preventing the metallic parts from melting. Mr. Muthel supposes that the electric spark jumps, so to speak, from one particle to another, and in this way causes a heating of the other substances, which, brought to incandescence, emit a more intense light.



ADJUDICATIONS.

(Under Bankruptcy Act, 1883.)

- BOWMAN, WILLIAM, 100 Duke Street, Liverpool, chemist. December 18. Court—Liverpool.
- BROOKS, WALTER REGINALD, and ATTEWELL, ARTHUR, Westmoreland Street, Liverpool, trading as "Brooks & Co.," aerated-water manufacturers. January 2. Court—Liverpool. Trustee—G. Mahon, 26 North John Street, Liverpool.
- GINSTER, MATHIAS JOSEPH LAUDENBERG, Ogley Haylock, Brownhills and Germania Cottage, Erdington, artificial-manure manufacturer. December 9. Court—Walsall.
- KING, ALFRED THOS., St. Anne's Well Road and 29 Twells Street, Nottingham, trading as "King & Co.," aerated-water manufacturer. December 7. Court—Nottingham. Trustee—R. Mellors, King John's Chambers, Bridesmith Gate, Nottingham.
- LAWRENCE, CHARLES, 1 Lincoln Street, Mile End, 50 and 52 Gun Lane, Limehouse, 103 and 105 Brook Street, Ratcliff, and 20 High Street, Bow, veterinary surgeon. December 4. High Court of Justice.
- MORTIMORE, CHARLES, 173 Sidwell Street, Exeter, oil and colour merchant. December 31. Court—Exeter. Trustee—R. Southcote, Exeter.
- POOLEY, WILLIAM, 1 Bridge Road, Grays Thurrock, trading as "The National Blue Ribbon Brewery Company," temperance-beverage manufacturer. December 5. Court—Rochester.
- STARKEY, JESSE, Stoke Golding, trading as "Starkey & Asbury," manure and mineral-water manufacturer. December 12. Court—Leicester. Trustee, W. H. Chamberlin, 4 New Street, Leicester.
- WINDLOW, LYTTELTON STEWART FORBES, 6 Old Cavendish Street, and the New University Club, St. James', doctor of medicine. December 24. High Court of Justice. Trustee—H. Godfrey, 22 Que en Street, Cheapside.

NOTICES OF MEETINGS.

(Under Bankruptcy Act, 1883.)

- PIGGOTT, GEORGE HENRY, and GODDARD, CHARLES, 61 St. John's Square trading as "G. H. Piggott & Co.," drysalter and provision merchants. First meeting January 18, at 11, at Bankruptcy Buildings, Portugal Street. Exam. January 28, at 11, at 34 Lincoln's Inn Fields. High Court of Justice.
- ROPER, ALFRED C., & Co., 9 Mining Lane, colonial brokers. December 30. Exam. February 2, 12, at 34 Lincoln's Inn Fields. High Court of Justice.

NOTICES OF DIVIDENDS.

- CARPENTER, WM. JOHN, JUN., 147 Queen Victoria Street, and Rotherhithe, trading as "Carpenter & Co.," oil and colour merchant and manufacturer. Proofs by January 16 to Trustee—W. Izard, 51 Gracechurch Street.
- HOUNSELL, DAVID ROBERT, Longfleet, Poole, aerated-water manufacturer, coffee-house keeper and confectioner. Proofs by January 15, to Trustee—F. A. Dawes, Off. Rec., City Chambers, Salisbury.
- JUMEAUX, BENJAMIN, Springfield, Ambleside, surgeon and artist. Proofs by January 6, to Trustee—H. G. Pearson, Off. Rec., 2 Paxton Terrace, Barrow-in-Furness.
- MANGLES, JOHN, Didsbury and Manchester, trading as "John Mangles & Co.," drysalter. Proofs by December 23, to Trustee—J. Eckersley, 64 Cross Street, Manchester.
- MCCARDELL, JOHN ADAM, Manchester and Withington, drysalter, indigo and aniline dye merchant. Proofs by December 19, to Trustee—J. Eckersley, 64 Cross Street, Manchester.
- SMITH, JOSEPH, St. Alban's House, Weymouth, chemist and druggist. Proofs by January 15, to Trustee—F. A. Dawes, Off. Rec., City Chambers, Salisbury.
- SMYTH, THOMAS, Narberth, chemist, wine and spirit merchant, grocer, &c. Proofs by December 31, to Trustee—J. A. Jenkins, Fern House, Tenby.
- TEMPLEST, RICHARD SPENCER, Bradford, trading as "R. S. Templest & Co.," druggist and drysalter. Proofs by January 21, to Trustee—J. C. Wright, accountant, Ivetgate Chambers, Bradford.
- VALLENTIN, OSCAR FERDINAND, 4 Northumberland Alley, Fenchurch Street, and Leytonstone, gum and colour merchant. Proofs by December 19, to Trustee—R. P. Harding, 33 Carey Street.

NELSON, ALFRED HORATIO, 1 Sherland Road, and Station Road, Twickenham, trading as "W. H. & J. Nelson," photographic chemist. Div. 2s. 8½d. on any Monday, at Off. Rec. office, 28 and 29 St. Swithin's Lane.

RICHARDS, WILLIAM ARMSTRONG, Wettenhal Cottage, Wheelock, manager of alkali works. Div. 3s. 5d., on December 29, at 11 Temple Street, Swansea.

APPLICATIONS FOR DISCHARGE.

- SMITH, GEORGE, 72 Mark Lane, and Anchor Works, Bow Bridge, starch and vinegar maker. Hearing 19th January, 12. High Court of Justice.
- BOWING, JOHN, Upper Woodland Terrace, Charlton, analytical chemist. 4th February, 11.30. To apply for discharge. High Court of Justice.

ORDERS OF DISCHARGE.

- GILMAN, THOMAS, JUN., 78 Lichfield Road, Aston, and Gosta Green, Birmingham, druggist and drysalter. Suspended until he shall have paid to Trustee 2s. in the pound on all debts.
- MACDONALD, JOHN, Blinkbonny, Walton-on-Thames, physician and surgeon. Granted, subject to conditions.
- VALLENTIN, OSCAR FERDINAND, 4 Northumberland Alley, Fenchurch Street, and Leytonstone, gum and colour merchant. Suspended three months, to March 8.

SCOTCH SEQUESTRATIONS.

- CAIRNS, WALTER, and WYLLIE, MATTHEW, Saint Rollox Oilworks, North Oswald Street, Glasgow, as "Cairus & Co.," oil refiners and manufacturers. 18th December, 12. Faculty Hall, St. George's Place, Glasgow. Claims by April 7.
- HUME, ELLIOTT, Grassmarket, Edinburgh, drysalter. 17th December, 2. Dowell's Rooms, 18 George Street, Edinburgh. Trustee, J. Craig, accountant, Edinburgh. Claims by April 8.

LIMITED COMPANIES ORDERED TO BE WOUND UP.

- BRISTOL CROWN BOTTLE-WORKS COMPANY (LIMITED). December 5, by Vice-Chancellor Bacon. On petition of Bernard Edwards, coal merchant, Newnham-on-Severn. Solicitors, Vallance & Vallance, 20 Essex Street, Strand, agents for Murly & Sons, Bristol.
- NEUROGENE COMPANY (LIMITED). On petition of E. L. Antrobus, manager of the company. Solicitors, Law & Worsam, 66 Holborn Viaduct, agents for Backby & Marshall, Leicester.

RESOLUTION TO WIND UP VOLUNTARILY.

- HYDE CHEMICAL COMPANY (LIMITED). 8th February, 12, at offices of Boote & Edgar, 18 and 20 Booth Street, Manchester. For accounts of winding up.

NOTICE OF COMPOSITION OR SCHEME, &c.

- ROBINSON, ROBERT, Tweed Street, Sunderland, trading as "Robert Robinson & Son," drysalter and oil merchant. Composition of 10s., by four instalments of 2s. 6d. at two, four, eight, and twelve months. Court—Sunderland.

PARTNERSHIPS DISSOLVED.

- AGELASTO, A., & Co., Southsea House, Threadneedle Street, London, Manchester, and Calcutta, merchants. (Despina Agelasto, John Antonio Ralli, and John Ambrose Negroponte, as regards Agelasto.) December 31. Debts by remaining partners.
- ALBISSE, ZIEGELE & Co., & H. C. SCHNEIDT, Mark Lane, merchants and commission agents. (Andreas Christopher Charles Albisser and Gottlieb Augustus Ziegele, as regards Albisser.) December 24.
- BAYLIS & THOMPSON, Smethwick, mineral or aerated-water manufacturers. (Benjamin Baylis, Edwin Thompson, and William Edward Cotter, as regards Cotter.) November 24. Debts by remaining partners.
- BOWKETT & DAVIES, East India Dock Road, Poplar, surgeons and apothecaries. (Thomas Edward Bowkett & Frederick Henry Davies.) December 19. Debts by Bowkett.
- CURTIS, WILLIAM, & JOHN FREDERICK WRIGHT, Alton, surgeons, apothecaries, and acconcheurs. January 1. Debts by Curtis.
- FABER, AUGUST & Co., Mark Lane, merchants. (Heinrich Bluhm, Robert Faber, and Henry Wood.) December 31.
- HALL & ROBINSON, surgeons. (William Hall, of Headingley, Leeds, and Arthur William Mayo Robson, of Hillary Place, Leeds.) January 1.
- HAYS, THOMAS, & Co., Gateshead, chemical manure manufacturers. (Elizabeth Hays, William Charlton Blackett, and Ralph Fenwick Blackett.) December 22. Debts by Hays and W. C. Blackett.
- JENKIN & PHILLIPS, Lime Street, drug brokers. (Thomas Henry Phillips and Harry Tom Phillips.) December 31. Debts by T. H. Phillips.
- KNIGHT, A. H., Tudor Place, Tottenham Court Road, soap manufacturers (Alfred Howard Knight and Edward Boyle.) January 1, 1884.

MARSDEN, P. & E., Sticker Lane, Bowling, in Bradford, manufacturing chemists and soap boilers. (Peter Marsden, dec., and Edward Marsden.) April 15, 1882.

MAYER, R., & SON, Myddelton Street, Clerkenwell, mineral-water manufacturers. (Julia Mary Ann Symons and Alfred Richard Mayer.) November 25. Debts by Mayer.

MCPHAIL, T. R., & Co., Liverpool, chemical and general brokers. (Thomas Robinson McPhail & Francis Henry Jones.) December 31. Debts by McPhail.

PAINES & REID, Fenchurch Street, colonial brokers. (Cornelius Paine, Cornelius Henry Paine, and William Wardlaw Reid, as regards Reid.) December 31.

PARRATT, LODGE & Co., Liverpool, general produce brokers. (Thomas Pennington Parratt and Alfred James Lodge.) December 31. Debts by Parratt.

THOMPSON & WELLS, Bath Lane, Newcastle, aerated-water manufacturers. (Andrew Thompson and Shadrach Wells.) November 25. Debts by Wells.

TOWNE & JOHNSON, Rectory Road, Stoke Newington, surgeons. (Alexander Towne and James Bovell Johnson.) December 31. Debts by Towne.

THORNTON, TREVES & THORNTON, Berkeley Lodge, Trinity Square, Dalby Square, and Cecil Square, Margate, surgeons. (William Henry Thornton, William Knight Treves, and Bertram Thornton, as regards Treves.) December 31. Debts by remaining partners.

(In Scotland.)

BAIN & BRENNER, Cadogan Street, Glasgow, oil refiners and paint manufacturers. (Thomas J. Bain and William Brenner.) November 25. Debts by Brenner.

CARRUTHERS & LIDDLE, Bath Street, Glasgow, dental-material manufacturers. (Wm. Carruthers and Jno. Liddle.) October 31.

DODDS, GEORGE, & Co., Drummond Street Court, Edinburgh, pickle makers and drysalers. (George Dodds and Nicol McCairn.) November 19. Debts by Liq.—W. B. Robertson, 53 George IV. Bridge, Edinburgh, accountant.

KETTLE, R., & Co., South Woodside Road, Glasgow, manufacturers of non-intoxicating ales and stout. December 18. (Robert Kettle, John Muir, and Thomas King.) Debts by Kettle.

Obituary.

BUTTERWORTH.—On November 26, Mr. Henry Butterworth, chemist and druggist, Tottenham Court Road, London. Aged 39.

BYTHEL.—Yet another link which served to connect the present with a past generation of pharmacists has been severed by this death. Thomas Poole Bythel, who died on the evening of last Christmas Day, in his 82nd year, after having carried on business for nearly sixty years, was a man universally esteemed, and had attracted to himself the respect of all who knew him. He was well versed in the history of his neighbourhood, and his contributions, which he frequently published in the local papers, were always read with interest, as he was justly deemed an authority of no mean calibre. He received his education at Shrewsbury Schools, and was apprenticed to Messrs. Lea & Perrins, of Worcester, whence he repaired to London, and remained there in a situation until he was called to succeed his father in business, which he did in 1828. Although of a reserved and retiring disposition, he obtained to a large degree the respect and affection of his fellow-townsmen, inasmuch as he ever evinced a deep attachment to all things pertaining to the welfare of the old town, his birthplace, in which he spent nearly three-quarters of a century of his useful life.

CALVERT.—On December 14, Mr. John Calvert, chemist and druggist, Blackburn. Aged 58.

CLARKE.—On December 17, Mr. Francis Clarke, chemist and druggist, Sunderland. Aged 44.

DAVIES.—On November 25, Mr. Richard Davies, chemist and druggist, Manchester. Aged 76.

HARRINGTON.—Mr. William Harrington, senior partner in the firm of William Harrington & Son, chemists and druggists, of Cork, died on December 16, at his residence, Sea View, near that city, at the age of 70 years. He was a magistrate and Harbour Commissioner of Cork, as also director of two

local companies. Like his father, who established the business as far back as 1805, he amassed a considerable fortune, and is succeeded by his sons, Messrs. William, Stanley, and Ignatius Harrington. The late Mr. Harrington was member of Council of the Pharmaceutical Society and Licentiate of the Apothecaries' Hall of Ireland.

HERRING.—We regret to announce the death of Mr. J. Barnwell Herring, of the firm of Herrings & Co., wholesale druggists, Aldersgate Street. The deceased gentleman was born on July 4, 1810, and was the youngest son of Mr. J. Herring, of Norwich. Starting his commercial career in the silk trade, he subsequently turned his attention to farming, which he carried on in Norfolk for several years. In 1852 his uncle, the late Mr. Thrower Herring, took him into partnership in Aldersgate Street, in which business he remained till his death. As a business man he was greatly esteemed for his strict integrity and respected for his universal courtesy. On more than one occasion he held office as master of the Musicians Company, while he always took the greatest interest in local matters connected with Esher, where he resided, and also with the Ward of Aldersgate, where he carried on his business. Bright's disease, from which Mr. Herring suffered since May, finally caused his death.

KAYE.—On December 17, Mr. Hamor Kaye, chemist and druggist, Huddersfield. Aged 67.

KEENE.—On November 17, Mr. William Keene, chemist and druggist, West Kensington, London. Aged 59.

KING.—On December 9, Mr. Charles Montague King, pharmaceutical chemist, Southend. Aged 61.

LEWIS.—On November 29, Mr. Drake Lewis, chemist and druggist, Eton. Aged 81.

ROLFE.—On December 5, Mr. William Adolphus Rolfe, pharmaceutical chemist, Bath. Aged 53.

MITCHELL.—On December 8, Mr. John Mitchell, pharmaceutical chemist, Manchester. Aged 69.

MORGAN.—On December 13, Mr. William John Morgan, chemist and druggist, Great Bridge. Aged 40.

PARKE.—On November 6, Mr. William Parke, chemist and druggist, East Dereham. Aged 45.

SNAPE.—On August 18, Mr. Edward Snape, chemist and druggist, Hull. Aged 40.

STANNES.—On December 22, in his 78th year, Mr. James Stannes, chemist and druggist, West Street, Tavistock. Mr. Stannes was for upwards of fifty years a member of one or more of the public bodies of Tavistock, and was held in great esteem by his fellow-townsmen.

TRIM.—On December 27, Mr. Edmund Trim, chemist and druggist, Birkenhead. Aged 44.

TRIBE.—Mr. Alfred Tribe, F.I.C. &c., died on November 26, at the age of 46. He was born in humble circumstances and in early life was occupied as a boy in the Royal College of Chemistry. He picked up whatever scientific knowledge he could, and attracted the attention of the principal Dr. Hofmann. At the age of sixteen he entered the service of Dr. Medlock, then of Dr. Forbes Watson, and afterwards assisted in succession Professor Williamson, Dr. Bernays, and Dr. J. H. Gladstone. He was head of Dr. Gladstone's laboratory for twenty years, until his recent death, and was associated with that chemist in many of his researches.

WADDELL.—On July 23, Mr. Andrew Morrison Waddell, chemist and druggist, Slamannan. Aged 38 years.

WALKER.—On November 24, Mr. Joseph Walker, chemist and druggist, Tewkesbury. Aged 47.

WILLIAMS.—On January 8, Mr. John Robert Williams, many years a respected employé of Messrs. S. Maw, Son & Thompson, in his 44th year. Mr. Williams was well known to many members of the trade in Australia and New Zealand, the United States, and South Africa, in which countries he had travelled for the firm.

WYATT.—At South Australia, on November 23, Mr. William Wyatt, chemist and druggist.

Notices of deaths, marriages, removals, and changes in firms are published free if sent to us properly authenticated.

Trade Report.

THE Board of Trade returns for December, 1885, show the following results:—

Imports.

	Dec., 1884	Dec., 1885
Total value	£33,073,970	£31,143,582

Exports.

	Dec., 1884	Dec., 1885
British and Irish produce ..	£17,840,103	£17,204,422
Foreign and colonial produce (partly estimated) ..	5,159,233	5,172,782

And below are the details affecting drugs and chemicals:—

Imports.

	Dec., 1883	Dec., 1884	Dec., 1885
Quicksilver	33,706	106,250	127,420
Alkali	2,278	8,895	10,425
Alkali	5,139	4,184	3,249
Alkali	4,825	4,024	3,142
Chemicals (enumerated) ..	120,030	123,400	120,953
Dyes (coal-tar)—			
Aniline	30,281	24,298	19,099
Alizarine		17,394	17,963
Other coal-tar dyes		1,140	87
Oil—			
Cocoanut	4,718	27,247	19,826
Olive	8,135	41,717	28,324
Palm	1,267	1,235	2,062
Petroleum	51,557	50,505	82,768
Seed, of all kinds	52,929	74,414	70,803
Train, blubber, and sperm ..	98,839	114,821	87,969
Turpentine	6,534,545	7,187,097	8,267,745
Bark, Peruvian	220,564	231,873	261,310
Gum—			
Arabic	1,015	1,716	1,646
Drugs, unenumerated	35,195	50,563	44,308
	1,467	1,638	1,859
	47,442	52,119	51,041
	13,293	40,048	22,747
	18,274	45,646	29,401
	10,036	8,657	19,467
	123,281	67,188	128,878
	2,664	3,616	10,053
	7,475	10,521	36,137
	83,403	75,707	63,081

Exports.

	Dec., 1883	Dec., 1884	Dec., 1885
Alkali	582,562	566,976	510,254
Bleaching materials	180,682	173,934	154,491
Medicines, including drugs ..	153,200	149,337	127,305
Bark, Peruvian	58,128	56,386	41,965
Foreign chemicals	73,553	76,519	82,572
Gum—	3,271	13,628	12,528
Arabic	21,779	58,800	75,026
Quicksilver	15,054	22,873	17,012
	4,340	3,830	6,450
	11,468	13,035	24,044
	237,363	420,694	288,870
	16,971	32,645	23,071

MINCING LANE, January 14.

Business since the beginning of the year has been quiet, and thus far the anticipations of a change for the better have remained unfulfilled. The first drug sales of the year, advertised for January 7, were again very large, so that they had to be continued on the following day; but the business transacted was scarcely in keeping with the large amount of goods offered, the prevailing tone being one of inanimation. Among the articles showing a firmer tendency were *ipecaeanha*, which improved quite 2*l.* per lb., and *Jamaica sarsaparilla*, which was slightly firmer; while *Cape aloes*, *senna*, *Colombo root*, and *croton seeds* remained firm at previous prices. On the other hand, *vanilloes* were 2*s.*, and

Ceylon cardamoms about 6*l.*, cheaper, while *musk* (*Tonquin pods*) must also be pronounced easier. *Gum arabic* (dark *Ghatti*) lost in some instances 10*s.*, and *Aden 5s.*, but *Turkey* and *Senegal gums* remain full up.

The opposition manifested against the inclusion of some articles, notably *tragacanth*, *sandarac*, and some varieties of *gum arabic*, in the regular drug sales, on the ground that they are not essentially druggists' articles, and unduly prolong the sales, again showed itself on the 7th inst., when a parcel of 158 packages *gum arabic* in Messrs. Hale's catalogue was reached. Eventually Messrs. Hale took out 46 packages *Cape gum*, but persisted in offering the *Amrad gum*, as well as the *Aden* and *Turkey* sorts, which were gone through among continued interruption on the part of the malcontents. Similar opposition, but in a slighter degree, occurred on the following day during Mr. Thomas Clark's sale.

ACIDS.—*Acetic* is quoted at 2½*d.* per lb. It should be noted that the position of the principal elements used in the manufacture of this article has improved of late, and different circumstances—for instance, a rise in the value of raw spirit on the Continent—might lead to an advance in the price. *Citric*.—This article has made a decided improvement since our last report, and within the past day there has been quite an excited feeling in regard to this article. Makers ask 2*s.*, and 1*s.* 10*d.* has been actually paid for second-hand lots. There seems to be some ground for this advance in the lemon-juice reports. *Tartaric* is steady, but without important transactions, at 1*s.* 7½*d.* for English, 1*s.* 6½*d.* to 1*s.* 6¼*d.* for foreign. *Oxalic*.—Without change in price, but moving off rather slowly at 4*d.*, less 10 per cent.

ALOES.—*Cape* are steady, and of 175 cases put up for sale, about half were sold at 27*s.* to 29*s.* 6*d.* for fair to fine hard; 17*s.* 6*d.* for common, soft, and drossy; two cases of clay and sand, more or less mixed with aloes, fetched 6*s.* 6*d.* per cwt.—a poor price for aloes, but not a bad one for dirt. Of *Natal* aloes we have no sales to report. *Barbadoes* fine are very scarce. *Socotrine*.—Of fine bright nothing is offering, but the supply of inferior to fair qualities is in excess of the demand. Of 71 packages only 17 were sold, one lot, dark and common, as low as 52*s.* 6*d.* *Curaçao* sells fairly well. On the 31st ult. our stock of aloes of all descriptions was 4,663 packages, being 729 in excess of the year before. The imports during 1885 reached 5,047 packages, the deliveries 3,956 packages.

ANTIMONY.—Crude, quite neglected. In sale 140 boxes Japanese were withdrawn at 18*l.* to 19*l.*

BEANS.—*Tonquin*.—The ordinary kinds of *Pará* are dull of sale, while the fine black frosted sort shows a good demand. In *Surinam* moderate sales at 2*s.* to 2*s.* 6*d.* are reported, while fine bold *Angostura* beans are quoted at 5*s.* to 6*s.* per lb. Twelve cases offered for sale on the 7th inst. were withdrawn.

BALSAMS.—*Capiri* remains flat and without inquiry; prices throughout 1885 were 2*d.* to 2½*d.* under those of 1884, and the supply, especially of *Pará* and *Maracaibo* balsam, plentiful. In sale 5 cases were withdrawn at 1*s.* 7*d.* *Pere*.—Steady; 6 cases good quality offered for sale were bought in at 5*s.* 9*d.*; although four of these are stated to have been sold privately, while one tin sediment fetched 4*s.* 1*d.* *Tolu*.—Quiet, with large stocks; 20 cases bought in at 1*s.* 9*d.* per lb.

BLEACHING POWDER.—Steady. Quotations now are 7*l.* 5*s.* to 7*l.* 10*s.*, ex warehouse. It is rumoured that a proposal is under the consideration of the makers of bleaching powder by which the whole production of that article in the kingdom will be sold through one broker.

BROMINE.—We give the following on the authority of Messrs. A. & M. Zimmermann:—"The great necessity for a reduction of output from the Stassfurt salt-mines has reduced the German makers to about half their former supply of chloride of magnesia liquor, and has, therefore, limited the supply of bromine to a very great extent. The same being the case in the United States, it has proved difficult to supply the makers of bromide salts in sufficient quantity for the new year, and prices considerably higher have had to be paid, which, of course, necessitated an advance in prices of bromides to a greater extent than as yet has been possible to effect. Confirmatory reports, however, coming in from

other countries with regard to a rising demand for bromine, we shall be obliged to raise quotations for bromides very shortly. It should also not be left out of consideration under this head that the manufacture of chemical colours with fast colours derived from bromine as a base has made great progress, and that already this year a good quantity of bromine has been contracted for this industry at better prices."

CODEIA.—A little easier.

COCHINEAL quiet, but firm. Our stock, although still considerable, is steadily decreasing, and numbered 7,636 serons on December 31, against 9,357 ditto in 1884. The imports show a still more marked falling-off, when compared with those of a few years ago.

CAMPHOR.—Crude has been in very brisk demand, and is quoted at present at 80s. for *Japan*, this being practically the only sort now offering. During last year the deliveries have been about 35 per cent. in excess of the landings, and on December 31 our stock showed 7,134 pack., against 8,413 in the previous year. Refined very firm at 1s. 1d.; a higher price may be anticipated.

CASSIA LIGNEA cheaper, with sales at 27s. for ordinary coarse, and 25s. for loose quills.

CLOVES are in active demand, and considerable private transactions are reported at 6½d. for fully fair Zanzibar. Our present stock, however, is large, showing 10,549 bales, against 6,719 on December 31, 1884.

CARDAMOMS have been steadily declining in value, owing mainly to the enormous quantities placed on our market by Ceylon, amounting to 147,000 lbs. in 1885, against 65,000 lbs. in 1884. In the last drug sales Ceylon (garden or cultivated sort) sold at irregular and lower prices, at 3d. to 6d. per lb. reduction in many instances. Of 190 cases of this kind one-third part sold, viz.:—Malabar kind, pale and bold, good to fine heavy plump at 3s. to 3s. 6d., fair at 2s. 6d. to 2s. 11d., rather brownish colour at 2s. 3d. to 2s. 4d., brown at 1s. 3d. to 1s. 9d., open pickings at 11d. to 1s. 2d.; Madras sort, long pale pods at 2s. 2d., and seeds at 1s. 3d. to 1s. 9d. Three cases Ceylon (native or wild sort) realised 1s. 1d. to 1s. 3d. Thirty-two cases, &c., Malabar all bought in at 3s. 6d. to 4s. 6d., also twenty-six cases Aleppi at 1s. 3d. to 2s. 4d. per lb.

CINCHONA BARK.—The month opened quietly, and in the drug sales of the 7th and 8th inst. the article experienced no alteration. Public sales of bark were advertised for January 12, and it was generally thought that the quantity offered on that occasion would be very large; but this expectation was not quite realised, many holders preferring to adopt for the present an attitude of reserve. The total number of packages offered reached about 3,000, of which only 710 were of South American origin. Owners seemed disposed to sell, and at first the prices realised were rather under valuation, but gradually more animation was shown, and by far the greater part was disposed of. Out of 2,152 packages Ceylon, 1,680 sold at about previous rates. Eleven bales Madras were bought in, while 119 packages Java bark all sold readily. Ledgeriana, branch, chips, 11½d. to 1s. 1d.; chips, strong quilly rich, 1s. to 1s. 1d.; root, 1s. 10d.; red, very dusty root, 4d. to 5½d. per lb. Of 710 packages *South American* the following were sold, viz.:—Forty-seven bales Calisaya quill, part Bolivian, at 1s 5d. to 1s. 9d.; 66 bales bright coated Pitayo at 7½d., and 153 bales middling Cuprea at 8½d. The statistics of the movements of bark in this port during the past year show very satisfactory trade; the quantity imported from the East, the chief source of our supplies, is slightly less than in the previous year, though probably fully equal in weight. The deliveries have exceeded the imports by nearly 19,000 packages, causing a sensible reduction in the stock, which now stands at 61,700 packages, against 80,500. This stock consists more than ever of the commoner qualities of Cuprea and other South American, for during the late rise, when about 20,000 packages South American sorts were sold, buyers chiefly selected the richer parcels, leaving the inferior in stock; so, although 61,000 packages may seem sufficient to work upon, the figures are a trifle misleading, as the quinine contents are comparatively small. The article appears to be in a thoroughly sound position, and, if supplies are not

largely increased, the price is expected again to gradually recover.

GUM ARABIC.—Turkey and Senegal gums continue to command excessively high rates, but East India is decidedly easier, fair dark Ghatti showing a decline of about 10s., while Aden is fully 5s. cheaper. In the drug sales held on the 7th and 8th inst., 734 packages were offered, of which 65 bales Turkey sorts were bought in at 9l. 10s. to 12l.: 20 packages ditto, picked, 13l. to 22l.; 10 packages brown Barbary, 4l. to 5l. 15s.; and 74 bales Amrad, 6l. The remainder consisted of East India gums, of which 83 packages sold. Aden sorts, good fair, 5l. 5s.; fair, 4l. 7s. 6d. to 5l.; inferior, 2l. 17s. 6d.; siftings, 30s. to 68s.; pickings, 25s. Ghatti, brown drop, partly run, 40s.; sea-damaged, and blocky, 38s.; siftings, 20s.; and a few small lots of Bombay, 75s.; slightly blocky, 65s. to 80s.; dark blocky, 40s. Gum sales are advertised for the 14th inst., when 3,600 packages will be offered. Our stock, although apparently large, consists mainly of East Indian gums in packages of 1½ cwt. to 2 cwt., while the stocks of previous years were largely composed of Turkey gums, in packages averaging twice that weight. *Australian* gum out of stock.

GUM ASAFOETIDA.—Ten cases good to fine pinky block met with no demand, and were withdrawn at 53s. to 56s., nominally. Our stock is large, and would, even without further supplies, suffice to meet the demand for some considerable time.

GUM BENJAMIN unchanged. *Siam* continues to arrive in large quantities, chiefly of good to fine quality. In sale 27 cases good to fine almonds withdrawn at 25l. to 26l., blocky siftings at 16l. Of 147 cases *Sumatra* only 10 cases fair seconds sold at 7l. 5s. to 7l. 7s. 6d. per cwt. The present stock of all descriptions is 1,586 cases, the average annual consumption for home and export being 2,450 cases.

GUM ELEMI remains unchanged at late rates. Among the 75 boxes offered on January 7 there was nothing in really fine white quality: 37 boxes fair to good realised 25s. to 31s. 6d.; 20 boxes common drossy 7s.; the latter were sold "without reserve."

GAMBOGE shows no change here, although prices have lately advanced in America. Twenty-eight cases were withdrawn at 12l. to 13l. 10s., with the exception of 3 cases sold privately previous to sale. Lately the deliveries have exceeded the imports.

GUM MYRRH.—No alteration in price can be reported, but the article is firm, fine qualities especially meeting with a good demand. Our imports, which are plentiful, consist largely of the more common descriptions. Our stock is now 319 packages, against 103 on December 31, 1884. Our annual consumption for home and export during the last six years has averaged 437 cases. In sale 118 packages were all bought in.

GUM TRAGACANTH.—On January 9, 500 packages were offered, but the sale went off quietly, and barely 100 cases sold at the following rates:—Syrian, 2nds, 7l. 2s. 6d. to 8l.; 3rds, 5l. 2s. 6d. to 6l. 7s. 6d.; 4ths, and pickings, 4l. 12s. 6d. to 2l. 17s. 6d.; chips, 3l. 15s. to 6l. 5s.; siftings, 2l. 12s. to 5l. Hog gum, 2l. to 2l. 5s.; good rather specky, 3l. 9s. Our stock is small.

IPECACUANHA is in active demand, and from 2d. to 2½d. per lb. dearer. In sale 48 packages Rio were offered, of which four only remained unsold, the others realising 3s. 4d. to 3s. 6d. for good sound, partly country damaged. Our stock on December 31 was only 122 serons, considerably less than the average; fine qualities especially are rare.

JALAP neglected, notwithstanding the rather favourable statistics, and held at 7d. nominally for fair Vera Cruz.

LEAVES.—*Buchu* are offered liberally, but without much response, especially as regards the long narrow variety, of which 13 bales good green were bought in at 1s.; 23 bales short round leaves likewise bought in at 4d. to 4½d. per lb. *Coca* neglected, owing to excessive supplies. Fifty-five bales offered on the 7th inst. did not meet with any offer. *Jaborandi* unaltered. *Senna.*—Tinnevely firm. The new crop sells freely, but bold leaves are very scarce. Our stock is low. In sale the greater part of 73 bales Tinnevely found

buyers at $1\frac{3}{4}d.$ to $6d.$ for common to fair; 2 bales rubbish sold at $\frac{1}{4}d.$ per lb.: 16 bales Alexandria mostly withdrawn.

MUSK is easier, with good supplies of Tonquin pods, for which at the same time there is a steady demand. In sale the greater part of 44 packages Tonquin was sold at 69s. to 74s. for good, rather unsightly, to fine boldish thin skin Pile I.; 32s. $6d.$ to 35s. for bally, skinny, and rough Pile II.; 16s. $6d.$ to 18s. for small bold Pile III.; 4 bottles empty pods bought in at 2s. $6d.$; 2 parcels skins sold at 2s. $6d.$ Of *Grain*, 41 bottles all bought in at 45s. to 60s. per oz. *Cabardine* plentiful, and cheaper.

OILS (ESSENTIAL).—*Unseed* is in fair demand, the quotation being 6s. $10d.$ per lb. for unworked on spot. *Cassia* steady; 7 cases withdrawn at 3s. $9d.$ *Citronella* flat; 64 cases met with no inquiry, and were withdrawn at $1\frac{1}{2}d.$ to $1\frac{3}{4}d.$ per oz.: last season's exports have been nearly 6,000,000 oz., a quantity never reached before.

OTTO OF ROSES.—Twelve vases bought in at 15s. to 24s. The anticipations formed in several quarters that this article would advance in consequence of the disturbed state of affairs in the Balkan Peninsula have not been realised so far.

PEPPERMINT firm, with higher tendency. American meets with continued favour at 18s. $6d.$ per lb. for H. G. H. *Japanese*.—Under date September 16, 1885, Messrs. Cocking & Co. write as follows:—"Since our last report a large portion of the new crop has come in. Prices for the crude material opened firm, and rapidly increased, owing principally to a speculative movement on the part of the Japanese dealers in the interior. Growers are therefore still sanguine of maintaining high prices, but, in face of the greatly increased production, we still maintain our opinion that we must see lower prices, although at the present moment circumstances are not in favour of such being the case." In the last drug sales one case of Japanese oil, mark A.T.C., was withdrawn at 14s., a bid of 11s. $9d.$ being declined.

OPIMUM.—Four cases sea-damaged, sold without reserve, realised 6s. $6d.$ to 8s. $9d.$ per lb. The market is now steady, with fair inquiry, but prices have had a downward tendency the greater part of last year, and the improvement the last month or two has not been sufficient to recover the previous decline. The supply in London can only be approximated, so much of the stock being in private warehouse. The stocks for the last three years, together with quotations and crop, have been as under:—

	December 30, 1883			December 31, 1884		
	Cases	Quotation		Cases	Quotation	
Shipping varieties ..	600	18' to 20'	..	1,250	16' to 17'	..
Druggists' ..	1,800	11 6 " 12 6	..	1,550	12 6 " 13	..
Persian ..	650	14 " 16	..	450	15' " —	..
	3,050			3,250		
Crop of Turkey ..	6,500	..	..	5,000	..	..
" Persian ..	2,500	..	..	4,000	..	..
	December 31, 1885					
	Cases	Quotation				
Shipping varieties ..	1,400	15' to 15 6	..			
Druggists' ..	1,300	11' " 11 6	..			
Persian ..	400	14 9 " —	..			
	3,100					
Crop of Turkey ..	7,000	..	..	
" Persian ..	3,000	..	..	

The average quotation for the three years 1879-1882 was:—Soft shipping, 19s. $9d.$; druggists', 17s. $9d.$; Persian, 16s. The demand for opium has been affected the greater portion of last year by the general depression of trade, coupled with special causes of weakness, such as the political disturbances in Peru, and low price of sugar in Cuba and other producing markets where Chinese coolies are employed, and it is only the last month or two that speculation has stepped in to regulate values more in accordance with the actual position of the article. The estimates of the 1885 crop vary much, but the best authorities put 7,000 cases at the outside, this being somewhat above the average in quantity, while it is undoubtedly in all-round quality the worst crop we have had for years, though some growths have been satisfactory.

QUICKSILVER.—The importer during the greater part of the month has held at 67. 5s. per bottle, but the article has been obtainable from second-hand holders at 57. 19s. A few days ago the importer reduced his price to 67. The exports,

which in 1884 reached their highest figure, have fallen off during 1885; but, on the other hand, the imports declined in almost the same proportions. The average price during 1885 has been rather higher than during the preceding year. Official returns have just been published, from which we extract the following:

	Imports	Exports	Price	
			Highest	Lowest
	Bottles	Bottles	£ s. d.	£ s. d.
1885	55,153	48,823	6 15 0	5 10 0
1884	59,970	52,492	6 15 0	5 2 0
1883	54,520	48,997	5 17 6	5 2 0
1882	45,921	40,424	6 5 0	5 14 0
1881	58,261	24,842	7 0 0	6 2 6

The estimated consumption of quicksilver in the United Kingdom is 13,000 bottles per annum.

RHUBARB has received but scant attention; really fine Shensi is still absent from our market, good qualities are held firmly and above value. In sale 56 cases out of 178 sold:—Shensi, small flat, three-fourths fair and one-fourth dark, 1s. $7d.$ to 1s. $8d.$; without reserve, round, one-half grey pinky and one-half dark at 10d. up to 1s. $7d.$; for round and flat fair, with some dark, good bright, small and medium flat, high dried, at 1s. $5d.$ Canton, medium and bold, round good greyish, 1s. $5d.$; flat part grey, 1s. $6d.$; and, without reserve, more or less off quality and wormy, $6\frac{1}{2}d.$ to $8d.$ Twenty-five bales Rhapsontica bought in at 5d. Our stock, which is very heavy—viz., 2,051 cases, against an average of 815 during the five previous years—is to a great extent composed of fair to medium Shensi root. The arrivals throughout the year 1885 have been very large.

SARSAPARILLA.—With the exception of *Jamaica*, which realises a slightly better price, all varieties have remained unaltered. *Honduras*.—Out of 42 serons only two sold at 1s. $9d.$ *Guayaquil*.—Fifty-six bales were offered, of which twenty found buyers at 11d. to 11 $\frac{1}{2}d.$ for second, and 7 $\frac{1}{2}d.$ for third class, damaged. Sound root was not sold. Of 8 packages *Red Jamaica*, 3 ditto sold at 1s. $5d.$ per lb.

SPERMACETI.—Owing to great scarcity prices have much advanced, and may be still dearer.

SEEDS.—*Caraway*s are in active demand, with sales at 32s. $6d.$ to 33s. $6d.$ *Croton* firm, dull to fine bright realising 55s. to 71s. *Fennugreek*, 690 bags, all bought in at 6s. $6d.$; 7s. $3d.$ for dull to bright.

SAFFRON, very scarce.

SULPHATE OF AMMONIA.—We understand that offers have lately been solicited on this market for a parcel shipped from Sydney, being produced by the gasworks in that place. Grey, 24 per cent., is worth 107. 15s. to 107. 17s. $6d.$ per cwt.

SULPHATE OF COPPER steady at 147. 15s., but demand somewhat poor.

SULPHATE OF QUININE.—The improvement which was hoped for with the beginning of the year has actually taken place, and a considerable business in German makes has been transacted on speculative account at late prices to 1d. per oz. advance, but Howard's and Pelletier's price is unchanged, at 3s. $4d.$ and 3s. $2d.$ per oz. respectively. In German SULPHATE OF QUININE large transactions have taken place, 70,000 oz. changing hands at 2s. $9\frac{1}{2}d.$ The article is rather firmer in consequence, and more activity prevails. There are 15,000 oz. of Brunswick in tins to be sold without reserve on January 15, and it is reported that the owners are so confident in the firmness of the market that they have refused a private offer of 2s. $9d.$

OF SPICES, *Cloves* continue to improve, $6\frac{1}{2}d.$ being now paid for good Zanzibar. *Pepper* is quiet, *Ginger* and *Chillies* dull; while *Pimento* and *Cassia Lignea* are somewhat cheaper, and *Nutmegs* rather firmer.

WAX.—*Carnauba*.—The low prices having attracted attention last November, a large part of the accumulated stock was cleared at from 56s. down to 50s. for good yellow, and 34s. to 30s. for grey sorts, partly for consumption and partly speculation. Our stock is now very moderate, but the market, as we close, is quiet. *Japan*.—The demand is inactive, at 62s. 6d. to 63s. for good to fine white squares. *Bees'*—In the last sales there was a good supply; 153 packages Madagascar yellow and grey were bought in at 5l. 10s. to 5l. 15s. Of 18 casks Jamaica 5 sold at 6l. 7s. 6d. to 6l. 15s.; 24 casks Mogadore bought in at 5l. 5s. to 6l.; 2 blocks yellow Lisbon sold at 5l. 5s.; 3 bales Ceylon bought in at 5l. 10s.; and 4 cases Zanzibar at 6l.; 10 cases Bombay bleached sold at 7l. 10s. Of 39 cases Calcutta 1 case sold at 7l. 5s., and 3 cases greyish, 5l. 10s.; 38 serons Benguela bought in at 7l. 10s.; 10 bales Lisbon, 5l. 15s.; and 1 cask Mogadore, 5l. 10s.; 2 casks Australian sold, yellow and greyish, 5l. 10s.

VANILLOES, 2s. cheaper. There is a good demand, especially for the more common sorts, but the supplies have been very large, no less than 238 tins being offered for sale on the 7th inst.

(FROM OUR AMERICAN CORRESPONDENT.)

NEW YORK, January 2.

The market is still under the control of holiday influences, and, in consequence of the restricted demand at this season, few alterations in prices have to be noted. In spite of the inclination displayed by dealers all over the country to restrict their purchases to current wants, sales in the aggregate have been satisfactory, and the volume of business done during 1885 by the drug houses of this city may safely be said to have largely increased. With respect to the future a general feeling of confidence and encouragement prevails.

The export trade cannot be said to be as prosperous, for, although a much larger business was done than formerly, the depression in the European markets caused very low rates to prevail for most American staple drugs, and, as a rule, little profit was left to shippers. New York, however, continues to progress steadily as a drug centre; at present it plays an important part in the distribution of such articles, and there can be little doubt but that its influence will continue to increase.

The prices sterling (in parentheses) are what the different articles would cost delivered in London, all market allowances, discounts, &c., being taken into account. Importers can, therefore, see at a glance the course of this market compared with their own.

BALSAMS.—The position of the market for *Copaiba* is unaltered; arrivals have fallen off somewhat, and are at present not in excess of the demand. Maracibo is quoted 30c. (1s. 4½d.); Para, 32c. (1s. 5½d.); pure Maranhão, 33c. (1s. 6d.). *Tolu*.—In large supply, but is bought on arrival by a large house here, no matter what the quantity; this firm evidently has faith in it yet. The market is 34c. (1s. 6½d.). *Canada* is quite neglected.

CALIFORNIAN HONEY.—The report of the 1885 crop being a short one is fully borne out by the result of the shipments from San Francisco, viz.:—

Shipments of honey, in cases, from July 1, 1885	..	..	3,785
" " " same time in 1884	..	..	10,643

Good white candied quality is very scarce, while yellow is quoted equal to 33s. to 35s. per cwt. in London.

COCA LEAVES are in very large supply, and the market is greatly depressed. The large cocaine-makers say they have bought enough to carry them on till May next, and the holders, seeing no other outlet for such large stocks, offer at prices under those asked in Peru. Fair quality green Peruvian leaves, 35c. (1s. 7d.); and the small light green Bolivian, 40c. (1s. 9d.). The latter are not thought much of for manufacturing.

SPERMACELE.—The manufacturers have none to offer for prompt, or, in fact, for delivery before April, so that consumers must look to second-hand parties for their supplies; and, as these are reported to have paid from 42c. to 45c.

(1s. 10d. to 1s. 11½d.), high rates may be expected to prevail. The holders of crude sperm oil have advanced the price also, and this article is now nearly as high as the refined.

BORAX.—The market has been gradually improving, and to-day city refined crystals are quoted 7½c. (34s. 6d.); powder, 7½c. (36s.); Californian concentrated, 6½c. (31s.); ditto in powder, 6½c. (32s. 3d.).

CAMPHOR.—Refined is dearer, and may be expected to advance as the season of consumption approaches; 4-oz. blocks are quoted 23c. (1s.).

BROMIDE POTASSIUM is meeting with no inquiry for export at the recent advance, as European markets rule lower; here, 36c. (1s. 6½d. 5 per cent.).

SMAROUBA BARK.—Some arrivals have taken place; price, 16c. (9d.).

GUM THUS has advanced, and prime soft white is scarce; price, 2½c. (14s.).

COD-LIVER OIL.—Pale yellow Newfoundland meets attention at 75c. per American gallon (3s. 9d. Imperial gallon).

CUBEBS.—A large parcel in transit by steamship *Persian Monarch* having been destroyed, the market sharply advanced to 95c. for prime (22l. 10s. per cwt.).

ESSENTIAL OILS.—*Wintergreen* is very firm at the late advance, \$2.10 (9s.). *Sassafras* is in large supply, and cheaper, 40c. (1s. 8¼d.); this is to be accounted for by the mild winter in Virginia and Maryland allowing the farm labourers to dry greater quantities of the roots than usual; there has been no frost or snow to interfere with the work. *Spearmint* is very dear, \$6.50 (27s. 9d.).

OIL PEPPERMINT.—The market has been very quiet owing to the almost total absence of inquiry from Europe. The total shipments since the new crop began to come on the market adds up close on 30,000 lbs., or more than half the total production; it will therefore be seen that, when the home consumption is supplied, there will be no great quantity left for export. Prime Wayne County oil in tins is quoted \$3.80 (16s. net), while H. G. Hotchkiss' brand is nominally \$4.10 to \$4.20 (18s. 9d. to 19s. 3d.), stocks of both being small.

QUININE.—The American manufacturers on December 26 made a further reduction, and now quote bulk 73c. (3s. 2d., 5 per cent.), but this action has not stimulated the demand in the least. Speculative interest in this article is not great, as lower prices are looked for.

ROOTS.—*Jalap* much neglected; prime Vera Cruz, 12c. (7d.). *Serpentaria* is without change; the holders in Texas are still firm. *Senega* is meeting with little or no demand, although prices are low; 45c. for prime Western roots (2s. 1d.), good, but chumpy, 43c. (2s.). *Sarsaparilla*.—Vera Cruz is cheaper, owing to arrivals; 10c. (52s. per cwt.) is quoted generally. Honduras is quite neglected, and large arrivals continuing to take place, a big drop in price must be looked for before long.

MARSEILLES.

Our correspondent writes as follows, under date of January 9:—

The quiet tone generally prevailing on our market between December 20 and the middle of January appears this time to be more pronounced than ever. Not only are there no important transactions whatever to mention, but the parcels which actually changed hands were even smaller than usual. Hopes are, however, entertained that, after the stocktaking and closing of books, a more lively business will ensue. The following are the actual quotations for some of our principal articles:—

Cream of tartar, 120s. per cwt. Citric acid, 170s. per cwt. Tartaric ditto, 190s. per cwt. Quicksilver, 1s. 7d. to 1s. 8d. per lb. Manna—drops, 3s. 6d.; broken, 2s. 3d.; sorts, 1s. 7d. to 1s. 10d. Saffron.—Spanish, 40s. to 43s.; Gatinais, 33s. 6d. to 42s. Opium, 10s. to 12s. per lb., according to the percentage of morphine.

GUM ARABIC is very firm, but our buyers have lately lived from hand to mouth, and important transactions did not take place. The latest rise in London has enabled our owners to export to England several hundred bales of sorts, but during the last days the London quotations and our own have again become level, and our prices are for *Turkey* sorts, 9l. 10s. to 11l.; *Senegal*, bas du fleuve, 6l. to 6l. 5s.; *GALAM*, 5l. 15s. to 6l. Other gums rule as follows:—**OLIBANUM**—drops, 45s. to 56s.; sorts, 23s. to 27s. 6d. **DAMAR**.—*Batavia*, 85s. to 87s.; *Singapore*, 80s. to 82s. 6d. **SHELLAC**.—*Orange*, 77s. to 80s.; *Garnet* (A.C.), 60s.

SEEDS—Our market has been in an excited state throughout the season, many crops having been unfavorable. *Caraway*s.—*Tunisian* (the only variety imported here) are not to be had—all arrivals having been bought up rapidly at rising prices, from 24s. to 32s. 6d. *Aniseed*.—*Levantine* fetches 26s. 6d. to 35s., according to quality; *Spanish*, 45s. to 50s. *Coriander*, until lately neglected, now attracts more attention at 11s. 6d. to 12s. *Fennugreek* without demand; pale at 7s. to 8s., nominally held. *Fennel*.—*Salonica* usually monopolises our market, and is sold in large quantities. Last year the importers have combined to uphold the price against the sellers on forward delivery, a fictitious rise being thus caused, and 30s. to 35s. paid. The result has been large arrivals from Germany, Italy, and even direct from Bombay. It may be questioned whether the distillers look upon these varieties as favourably as upon the *Salonica* seeds, although it is certain that these imports have served to foil the designs of the combination of importers. *Cummin*.—No stock here. Arrivals sell briskly at 22s. 6d. to 25s. for *Levantine*, and 32s. to 35s. for *Maltese*.

ROOTS.—*Gentian*, 15s. *White Hellebore*, 23s. *Pellitory*, 45s. *French Rhapontica*, 20s. *Orris*.—*Florentine*, 26s. to 27s.; *Veronese*, 22s. 6d. to 25s.; *Mogadore*, 18s. 6d. to 20s. *Licorice* scarce; common, 14s. to 18s.; selected small bundles, 28s. to 30s.; decorticated cut, 48s. to 50s.

SULPHUR.—This article commences to show greater activity, owing to the purchases made by wine-growers. *Sublimed*, 7s. 6d. to 8s. 6d., according to packing (bales or barrels). *Roll*, 6s. 6d. to 7s. 6d.

VERDIGRIS.—Refined, fair to extra dry, 40s. to 63s.: ditto in pods, 45s. to 70s.; ditto, powdered, 75s. to 80s.

HAMBURG, January 8.

ALOES.—The arrivals of *Cape* have been sufficiently large for our requirements; good to fine hard may be had at 64m. to 68m. *Curacao*.—No stock in first hand.

BALSAM.—*Capivi*.—*Angostura* is quoted at 325m. to 330m.; *Maracubo*, 330m. to 340m.; and *Pará*, 300m. to 305m., according to quality. *Peruvian*.—An importer offers twenty-four cases fine quality, free of sediment, at 1,175m., another lot being held at 1,225m.

BORAX.—Owing to over-competition prices have lately fallen considerably, and it is said that the refiners are hardly able to produce at a profit at the ruling rates.

CAMPHOR very firm at the recent advance. Our second-hand holders are almost entirely out of stock. Refined is quoted at 200m. to 205m.; do. in squares, 205m. to 235m., according to size.

BARK; CINCHONA.—*Calisaya*.—Scarce. *Porto Cabello*.—Our imports during the last season were smaller than in 1884, but prices receded, and a considerable proportion of the arrivals, mostly fair to fairly good quality, still remains unsold.

BARK; QUILLAYA.—Good quality is scarce and fetches 33m. About the end of next month 15,000 kilos. per s.s. *Urda* are due.

CANTHARIDES.—Although the large purchases for account of American firms, which during last season caused a rapid advance in price, have now ceased, the article remains firm, owing, no doubt, to the smallness of our stock. Russian, new crop, unworked, 1,700m. to 1,750m.; do. sifted, 1,850m.

BEANS.—*Tonea*.—Supplies in importers' hands are getting low, while an American firm is said to have purchased about 2 tons on our market, chiefly from second-hand holders.

GALLS.—*China*, forward delivery nothing offering. Good quality spot is quoted at 136m. to 138m.

GUM.—*Elemi*.—Finest white Manila now fetches 110m.; good but slightly yellowish do., 100m.

LEAVES.—*Coca*.—Our imports during the last season have reached 150 tons, causing a very large fall in price. *Bolivian*.—Good sound greenish to fine green at 400m. to 500m.; do., brown, 250m. *Peruvian*, broken, green colour, 250m. *Jaborandi* rarer, owing to stoppage in supplies. *Pará*, 120m. to 125m. *Matico*, supplies of which have lately been very short, are now worth 135m. to 140m.

OIL.—*Cassia* quiet at 730m. The stock is said to be in firm hands.

ROOTS.—*Jalap*.—Our imports during 1885 reached 2,000 serons, the article remaining quite neglected throughout the year. Recently a somewhat better demand has sprung up at 95m. to 100m. for good quality. *Gentian*, French, 32m. to 33m. *Galangal*, 28m. to 30m. *Licorice*.—Not a single packet has been imported here from Alicante throughout the whole of 1884. *Sarsaparilla*.—Although the stock of Honduras in New York is large (about 800 serons), this variety is firm at 370m. to 400m. for good to fine, while Mexican is easy at 100m. to 125m. for common to fine picked. The stock in importers' hands is computed at 300 bales.

SPERMACETI scarce.

WAX.—Japan prime white squares, spot, 124m. to 125m., forward delivery ex *Denbighshire* at 122m.

THE DRUG MARKET IN 1885.

We take the following from the annual report of Messrs. Reynolds & Sellers:—

ALOES.—Similar to last year, all descriptions, with the exception of good Socotrine, have been plentiful, and close lower in value. The consumption shows some falling-off, thus causing an increase in our stock of 1,000 cases over last year, chiefly *Cape* and *Curacao*. *Barbados*.—Some goulds of undesirable quality have been imported, coarse and black; extreme prices, considering the quality, were paid for the best lots, viz., 6l. to 6l. 10s., and 60s. to 85s. for ordinary. The latter are still obtainable. *Cape*.—Prices fluctuated until the summer between 34s. and 37s. 6d., when they advanced, owing to lighter supplies, to 41s. in July. From this point a gradual but heavy decline has taken place, resulting in a fall of 12s. The arrivals during the past six weeks have been unusually heavy. *Curacao*.—The imports of this description, as regards quality, leave much to be desired; not 20 per cent. can be classed as fit for keeping, and many boxes have arrived in a semi-liquid state. Good to fine qualities, whether old or new, have realised full rates, whilst common have fallen 15s. to 20s. Boxes, good to fine livery, are worth 5l. to 6l.; fair to good turning liver, 50s. to 85s.; coarse dark frothy, 15s. to 35s. *Socotrine*.—Good dry in cases have again been scarce this year, and when offered have sold well at improving rates, showing a slight advance; the last consignment of 95 boxes sold at the end of November at 8l. 5s. to 8l. 12s. 6d. **HEPATIC**.—*Zanzibar*.—The market has been well supplied with both tins and skins. Present quotations are:—Tins, good dry fair colour, 6l. 10s. to 7l. 5s. Skins, good fair to fine dry, 5l. to 6l.; soft or mixed with leaves, &c., 85s. to 95s. *East India*.—Frequent arrivals have come to hand, and when of good colour and fairly dry have sold well.

ANNATTO.—*Roll.*—Imports from South America have for the time ceased, owing to the unfavourable results of sales on this side. Only a few baskets of common dry have passed the hammer this year. We are without stocks.

BALSAM.—**CANADA** has been in moderate request at rather easier prices, viz., 1s. 9d. to 1s. 10d. **CAPIVI.**—*Maranhão* has also shown a downward tendency. The market closes quiet at 1s. 6d. to 1s. 6½d. for good bright; dark cloudy, 1s. 5½d. to 1s. 6d. *Para* and *Maracaibo* have been in plentiful supply, and realised 1½d. to 2d. discount. **PERU.**—Closing quotation is 5s. 6d. **TOLU.**—There has been a considerable decline from opening rates, although prices now show some recovery from the lowest. January opened with sellers at 1s. 11d., but gradually declined until July, since when, with less pressure to sell, there is some improvement, 1s. 9d. per lb. being nearest value.

BARK.—**CASCARILLA.**—During the last half of the year good merchantable quality has been obtainable at 28s., at which price importers have experienced a slow market, and are still sellers. **PERUVIAN.**—*Crown (Druggists' Sort).*—Guayaquil has been in large supply, and even at declining rates has met but a poor demand; prices show a fall of 40 to 50 per cent. on opening rates, and present quotations are as follows:—Fair to fine long, mossed, silver quills, 10d. to 1s. 4d.; ditto, grey and brown, part broken, 6d. to 8d.; ordinary, 3d. to 4½d. per lb. A few parcels of false Loxa came to auction early in the year, but sold at such low rates that shippers were probably deterred from sending any more. **HUANOCO** has been scarce, and realised full value. **EAST INDIAN.**—This is the first year that the exports from Ceylon have not shown an increase over previous years. The quantity rose from 7,000,000 lbs. in 1883 to 11,000,000 lbs. in 1884, and last season the total was a few thousand pounds less than in 1884. New season's bark, however, is now being shipped in large quantities, and the total collection is likely to again show an increase. From South America low prices have somewhat checked supplies, but from Bolivia we hear of large shipments from new plantations, which are expected to yield increased returns later on; therefore at present there is not much likelihood of a scarcity of the raw material. The unit, which stood at 4½d. to 5d. in January, improved to 7d. to 8d. in the autumn, chiefly by purchases on American account, large forward contracts having been made for quinine for delivery late in the year; as soon as the demand from this quarter subsided the market fell rapidly, present value being 5d. to 5½d., according to quality, with a declining tendency.

BORAX.—With large arrivals of Californian, the market has been depressed, and prices have declined 10s. from opening rates. The present quotations for English refined are 30s. 6d. to 31s. 6d., according to make. Californian refined in Liverpool is selling at 26s. 6d. to 28s. per cwt., according to quality.

CAMPHOR.—The stock of this article has decreased 2,000 packages during the year, owing to a falling-off in the imports. This fact has mainly contributed to sustain the advance which occurred during the summer on the outbreak of cholera in Spain. Japan, of which our imports are now chiefly composed, closes at 77s. 6d. new import, and 80s. old reweights, also business on c.i.f. terms at 76s. near, and 77s. 6d. distant. **China.**—Sales at 77s. 6d. per cwt.

CARDAMOMS.—The cultivation in Ceylon of this once valuable article has quite revolutionised the trade—both as regards the quantity imported and consumed, and prices obtainable. A few years since only a few cases of native were exported; this year we estimate the imports from this island to have been 60 per cent. of the entire supply. Prices for all descriptions are about one-third what they were three years since. The quantity exported from Ceylon in 1882 amounted to 23,000 lbs., in 1884 it was 65,000 lbs., and the past season 147,000 lbs. During the year the fall is gene-

rally 2s. 6d. to 3s. all round. Rather better prices are now obtainable than was the case in the autumn, especially for good qualities. We quote:—*Ceylon* (Native), long brown bold plump clipped, 1s. to 1s. 3d., (Mangalore kind) good to fine pale heavy clipped 3s. to 3s. 9d., brown, part shelly and unclipped 2s. to 2s. 9d., (Tellicherry kind) good to fine pale heavy 2s. 3d. to 3s. *Madras*, medium to good fair, part shelly (nominal), 1s. 9d. to 2s. 6d. *Mangalore*, pale heavy, bleached, 3s. to 3s. 6d.; brownish, light, 2s. 6d. to 3s. *Malabar*, small plump heavy clipped, 2s. 9d. to 3s.; medium to good brownish, unclipped, 2s. 3d. to 2s. 6d. *Tellicherry*, fair to good bold pale clipped, 2s. 9d. to 3s. 3d.; brownish shelly, 9d. to 2s. *Seeds* (various), 1s. 9d. to 2s. per lb.

COCHINEAL.—There has been an advance for the year of 2d. per lb., which has been very gradual, and as a rule firmly maintained. A very large business has been done, part speculative, and at the close there is every indication of a further improvement in the new year. The statistical position is favourable, the consumption having again exceeded imports, and the stock is fast falling to a more reasonable quantity. At the low prices current during 1883-84 there is no doubt it did not pay to cultivate the insect, hence the falling-off in our imports, which were treble in 1880-82 than that of the past two seasons. Present quotations are:—*Teneriffe* silvers, 1s. 3d. to 1s. 4d.; rosy blacks, 1s. 4d. to 1s. 5d.; grey blacks, 1s. 5d. to 1s. 7d. per lb.

CUBEES.—High prices continue to rule for this article, and a substantial rise has taken place on January rates, being well maintained notwithstanding larger imports. The consumption continues on an increasing scale. Opening at 10l. the market closes firm at 15l. for fair.

DRAGON'S BLOOD.—There has been no change of importance in this article. Low quality continues difficult of sale, whereas fine bright meets a ready sale when offered in moderate quantity. Present quotations are:—*Lump*, fine bright soft, 8l. 10s. to 9l. 10s.; good, 5l. to 7l.; ordinary to fair bricky, 60s. to 30s. *Reed.*—In small supply, fair to good, 5l. 10s. to 9l. per cwt. No fine here.

ERGOT OF RYE.—The failure of the Spanish crop this season, combined with moderate offerings of both German and Russian, caused an active speculative demand in the autumn, with a rise of nearly cent. per cent. in value. A considerable quantity was bought for shipment to the United States. *Spanish* closing firm with sales at 1s. 4d., although higher prices are generally asked. Present value of good clean *Russian* is 1s. per lb.

GALLS.—*China.*—In the autumn rumours of a short crop were circulated; as these were verified and more or less believed in, the general estimates being only half a crop as compared with last year, a sudden and rapid advance took place early in November—in a few days 65s. was paid, and 70s. for a small parcel of very pale. The market closes firm and dearer at 70s., with business near at hand at 69s. *Japanese* are worth 65s. *Turkey.*—There has been a steady demand, especially for really good blues. Present prices are:—Good blues, 57s. 6d. to 60s.; blue and green, 52s. 6d. to 55s.; green and white, 50s. to 52s. 6d. per cwt. Fine blues, if here, would realise 62s. 6d. per cwt. The market is virtually cleared of green and white, and quotations are nominal.

GUMS.—**AMMONIACUM.**—The market has been fairly supplied with small lots of new import, although the total is much less than last year. Good drop is worth about 10s. more than at the commencement of the year. Good pale drop, 50s. to 55s.; fair drossy blocky, 30s. to 37s. 6d.; fine siftings, 20s. to 25s.; blocky seedy pickings, 7s. 6d. to 15s. per cwt. **ARABIC.**—With continued troubles in the Soudan and a practical cessation of supplies from Egypt, combined with an almost total failure of the Barbary crop, prices have been raised to what must be admitted on all sides to be famine rates. Large supplies of East Indian gum of various kinds have come on the market, but consumers being all bare of stocks have taken this for consumption to supply the deficiency of other kinds, especially Talca and Ghezirah. Our statistics show a marked increase in the number of packages, and the stock would appear double that of last year; this is not so, however, as the Turkey packages usually weigh 4 cwt. each, whereas the East Indian weigh but 1½ to 2 cwt. Until there is some signs of Turkey gum coming forward it is

impossible to say to what price this article can go; the major portion of this year's advance has been paid during the past two months, and at the time of writing the market is still firm although not so active. *Australian* shows an advance of 40s. to 45s., and at the moment there is no stock here; the last sales of fair were made a fortnight since at 80s. to 85s., but it would now be worth rather more. *Barbary*.—Opening in January at 65s. sales were made in April at 32s. 6d., at which price the bulk of the old crop was cleared out. Only a few tons new gum have been imported and sold from 90s. to 130s., closing firm at 130s., or an advance of 65s. *East Indian*.—Some 20,000 to 25,000 packages have been imported this year, the bulk of which is so common that, had gum been cheap, it would not have paid freight and charges. Owing to heavy arrivals during the summer months the market became quiet, and for a time it must have tried the patience of holders, but, as Turkey grew scarcer, it recovered, and has continued to advance, showing a general rise of 40s. to 50s., Amrad and kindred kinds showing the greatest rise as substitutes for Barbary. *Senegal*.—There has been a larger crop of this description than last year, but complaints have lately been made of the quantity of dust and small mixed in the Galam sorts, most of which is probably not true Senegal. The closing quotation of Bas de Fleuve is 125s., Galam 122s. 6d. *Turkey* has gradually been diminishing, and as for certain purposes consumers must have this description, there has been quite a struggle of late to secure the little offering at increasing rates, prices often rising 10s. and 15s. in a day. In June there was a pressure to sell a parcel of 123 bales in public sale, and the market gave way 15s., but this was immediately recovered, and is the only instance of a weak market during the year. Good sorts show an advance of 110s., being now worth 117., with ordinary to fair at 97. 10s. to 107. 10s. per cwt. *Picked*.—The quantity offering is small, and prices uncertain. This equally applies to the other Egyptian kinds, viz., Talca and Ghezirah. *ASAFETIDA*.—Early in the year heavy arrivals on an already large stock depressed the market, and on a parcel of 135 cases being pressed for sale at auction in March a fall of 15s. on opening rates was established. The stock being now concentrated into a few hands, what little is offering is held for almost opening rates, viz., fine bold pinky almond in block, 50s. to 55s.; good fair ditto, part dark and soft, 40s. to 45s.; inferior stony, 30s. to 37s. 6d. per cwt. *BENJAMIN*.—*Siam*.—The consignments of this description have been on a more liberal scale, and, with only a limited demand, prices have again tended in buyers' favour, showing a fall for the year of 6l. to 7l. *Sumatra*.—A large proportion of the imports this season have been composed of good seconds, which have been freely taken for consumption at moderate rates, and prevented active competition and high rates for special parcels. *Palembang*.—The market is now well supplied with all grades at the following rates, viz.—*ELEMI*.—Rather better prices have been obtainable, especially for fine white in small boxes. Quotations are: Good to fine white, 30s. to 40s.; yellow drossy to fair, 15s. to 25s. per cwt. *GAMBOGE* has been much depressed, and at times lower prices have been taken than for many years past. Lately the imports show a falling-off, and as the consumption continues good our stock is much reduced; better rates are therefore probable before long. *MYRRH*.—There has been a steady demand for all good and fine qualities, but owing to a plentiful supply of these descriptions, combined with large imports of common or Bdellium gum, prices have favoured buyers to the extent of 10s. to 15s. from opening rates. *OLIBANUM*.—The market opened steady with business in good fair drop at 37s. 6d., and improved during the spring, 42s. being paid in April; at the latter end of the month, on large arrivals which were brought to auction prices gave way, and the advance was lost. During the last six months a gradual improvement has taken place, good whitish drop being especially inquired for, and we close at the highest point of the year with favourable statistics. *TRACACANTH*.—Until within the past month there was a dull, declining market, fine qualities being unsaleable except at great sacrifice compared with inferior grades; but in December, owing to this gum being used in some cases as a substitute for Arabic, our stock had become much reduced, and with an active speculative and consumptive demand, prices rose in a few days early in December 50s. to 70s., although at the close the market is not quite so firm.

HONEY.—No returns are given of the quantity of foreign imported into this country, but we are of opinion that were such returns made we should find we had received more this season than for many years past. New Zealand has shipped large quantities, and the quality has been excellent. As a consequence of the excessive supply prices have again given way about 10s. all round, except for Jamaica, which has realised last year's rates. Californian, fair brown to good pale, 27s. 6d. to 32s. 6d.; Chilean ditto, 25s. to 28s.; Jamaica, 25s. to 33s.; New Zealand, 32s. to 35s. per cwt.

IPECACUANHA.—Lately there has been little offered, and rather better rates are obtainable, but the demand is slow. Fair to good bright 3s. 3d. to 3s. 6d.; ordinary to good fair, 2s. 11d. to 3s. 1d. per lb.

JALAP.—The demand continues limited. Our imports have fallen off one-third, and the stock is also much reduced; notwithstanding these favourable statistics, prices remain low and the market inanimate, good fair sound lately selling at 7d. per lb.

MUSK.—Considerable and varied fluctuations have occurred in this article. Since October there has been a steady market, closing as follows:—*Touquin*, pile 1, fair to good medium shape, part slight bally and damp, very thin skins, 70s. to 72s. 6d.; ditto thicker skins, 66s. to 68s.; pile 2, genuine but hard, some skinny and unsightly, 37s. 6d. to 42s. 6d.; pile 3, rough, part hard, damp, and doubtful, 17s. 6d. to 22s. 6d. *Tunaw*.—Medium to bold, part damp, hard, and doubtful, 35s. to 45s. *Grain*.—Good to fine, 50s. to 70s.; inferior, 25s. to 40s. per oz.

OIL.—*Castor*.—There has been very little change throughout. A fair business has been done in fair seconds at current quotations, varying from 2 15-16d. to 3 1-16d. Fine druggists' oil, both firsts and seconds, have been rather scarce, and are in consequence fractionally higher. Calcutta, good to fine firsts, 3 3-4d. to 4d.; fair to fine seconds, 3d. to 3 3-16d. per lb. *Cod Liver*.—*Norwegian*.—With ample supplies consumers have been able to lay in stocks of this necessary commodity at reasonable rates. Present prices show a fall for the year of 1s., and are as follows: Fair to good pale, 3s. 6d. to 4s. 9d.; yellow to straw, 2s. 6d. to 3s. 3d. *Newfoundland* has followed the downward tendency of the former description. *Japan*.—At the moment this kind is only saleable at the value of fish oil, and we have heard of no business recently.

OILS.—*Essential*.—*Aniseed*.—There has been more business in this article, the closing quotation being 6s. 10d. to 6s. 11d. *Cassia* has followed very close in sympathy with the former, the price now being 3s. 8d.; lately a parcel sold in sale unworked at 3s. 6d. per lb. *Cinnamon* has been in fair demand, with ample supplies; prices remain unchanged, viz., 1s. 3d. to 1s. 9d. as in quality. *Cinnamon-leaf* in plentiful supply, closing slightly in buyers' favour, viz., 2d. *Citronelle*.—The production of this oil has doubled in three years, the exports for last season being nearly 6,000,000 oz. An unusually large business has been done during the past year, chiefly on c.f.s.i. terms. Spot closes with a good inquiry at 1 1-16d. per oz. *Cajaputa*.—There has been a fair demand at steady rates, closing quiet with sellers at 3s. 3d. per bottle. *Peppermint*.—*American*.—H. G. Hotchkiss'.—There has been an active demand, chiefly speculative, throughout the year, and at the close an important advance has been established. For some two or three years the crop of mint in the States has been short, and this year seems to be no exception, hence the rise; at the same time it is understood that there are large "bear" sellers for forward delivery at much lower prices than our present quotation, and the market is likely to be held up, or go dearer, until these contracts are covered in; 18s. 6d. is the closing quotation. LB nominal, 16s. per lb. *Japanese* is in good supply.

RHUBARB.—On account of heavy arrivals since the spring far in excess of requirements, our stock has increased, being double what it was this time last year, and prices in consequence are lower.

ROOTS.—*Colombo*.—Rather better prices have been realised, and the few lots of good bright root which have arrived sold at 15s. to 20s. over last year's quotations. Our stock has greatly decreased. *Gentian* shows a decline of 5s., closing

with a fair demand at 16s. 6d. *Orris*.—Prices favour buyers, although the quality of recent arrivals is rather poor. *Sencha*.—2s. 3d. to 2s. 4d. per lb. is present value.

LEAVES.—*Buchu*.—Short round green, which were unobtainable last year, began to arrive in March, and prices closed at 3d. for good fair green. The bulk of the yellow leaves were cleared out early in year at 1½d. to 2d.; now they would not be worth this price. Long narrow are not in much demand, and close lower, at 9d. to 10d. per lb. *Coca*.—We were without supplies of any consequence until the early summer, and fancy rates were paid; but on arrivals in May the price dropped to 3s., and subsequently to 1s. 6d., at which there are now sellers. There is a large stock here, including, however, several parcels not genuine.

SARSAPARILLA.—All kinds of fairly packed root became scarce in the summer, and a general advance took place, but with lower supplies this has now been lost, and Jamaica especially is selling at a low figure. *Honduras* closes at 1s. 8d. to 1s. 9d. for good quality. *Jamaica* sold 1s. 7d. to 1s. 8d. *Lima*.—At the moment we are without stock. *Merican*.—Not much is offering at the moment, nearest value being 6d. *Guayaquil*.—Recently a few lots of damaged sold at 10d. to 11d.; sound root is worth 1s. 2d. to 1s. 3d. per lb.

SENNA.—*Alexandria* has continued scarce, especially the finer sorts, for which a considerable advance has been paid; broken leaf has been recently sold at 7d. to 8d. *Timucelly*.—The crop this year has been almost a complete failure; instead of receiving some 3,000–3,500 bales as usual, we do not think the total export this season will exceed 1,000 bales, two-thirds of which are common Bombay sorts of the poorest description, hitherto barely saleable. An advance of 2d. to 6d. per lb. has already taken place, and as we cannot get further supply from any source until next autumn, and our stock here is reduced to one-third of what we usually have, much higher prices are likely to rule during the coming spring.

VANILLOES.—With large supplies both of old and new crop, prices throughout the year have tended in buyers' favour, and show in the aggregate a heavy fall from opening rates, viz., 6s. to 10s.

The following were the Stocks in the Port of London on December 31 last, with those for the corresponding date of the previous year:—

	1885	1884		1885	1884
Aloes .....cs	4,479	3,624	Gum (<i>cont</i>)—		
"kegs	24	32	Benjamin ..pkgs	1,586	1,221
"gourds	160	278	Damar "	3,787	3,550
Aniseed, Star chts	438	207	Galbanum .. "	15	31
Arrowroot .....cks	11,372	10,496	Gamboge .. "	139	182
" bxs & tins	3,064	5,670	Guaicum .. "	38	96
Balsam.....cks, &c.	566	587	Kino "	160	156
Bark, Medicinal			Kowrie .....tins	2,031	662
" cks & cs	4,038	3,672	Mastic .....pkgs	119	250
" srns, &c.	57,862	76,828	Myrrh, E.I. "	319	103
Borax.....pkgs	699	525	Olibanum .. "	4,980	5,422
Bees' wax ..bils & srns	1,111	873	Sandarac .. "	1,378	1,271
" cks & cs	1,477	691	Tragacanth "	855	1,336
" cakes	4	7	Indigo, E.I. ..chts	9,135	12,158
Wax, Jap. vgtbl. pk	1,735	1,322	Spanish ....srns	1,599	2,831
Camphor ....pkgs	7,134	8,413	Ipecac.....cks & bgs	122	175
Cardamoms ..chts	829	513	Jalap .....bils	197	289
Cochineal, srns, &c.	7,686	9,357	Nux Vomica ..pkgs	996	1,099
Coc. Ind. bgs, &c.	334	446	Oil—		
Colombo root pkgs	927	1,643	Castor .....cks	536	476
Cream tartar ..cks	48	52	"cs	6,871	8,058
Cubebs .....bgs	13	214	Palm .....tins	247	67
Dragonblood chts	139	158	Cocoanut .....tins	1,911	3,340
Galls, China & Jap.			Olive ..cks, &c.	1,322	385
" cs	3,035	1,530	Aniseed .....cs	285	366
E.I. ....bgs	—	—	Cassa .....cs	166	162
Trky & Prsn sks	2,618	3,010	Opium ..chts, &c.	2,149	2,467
Gum—			Rhubarb.....chts	2,051	1,079
Ammoniac pkgs	150	228	Saltpetre, Nit. Pot.		
Anhui & Copal pkgs	6,673	8,560	" tons	2,764	3,545
Arabic, all descriptions pkgs	9,283	5,538	Nitrate Soda .. "	5,327	2,368
Asafetida .. "	810	427	Sarsaparilla .....bils	425	477
			Senna .....bils, &c.	709	2,711
			Shellac, total chts	57,118	46,708
			Turmeric .....tons	837	947
			Vermilion, chts &c	—	5

HOPEINE

DR. W. WILLIAMSON has given this name to a substance recently discovered by himself and Mr. Springmuhl, and consisting of the narcotic alkaloid of *Humulus lupulus*, L., or the active principle of hops. The experiments made thus far would seem to point to hopeine as destined to play an important part in medicine, especially as an antispasmodic and a sedative in nervous diseases and affections of the brain. Indeed, Dr. Williamson claims for hopeine that it seems to unite the qualities of quinine and morphine, and possesses the properties of opiates without having, so far as has been ascertained, any of the drawbacks of these substances.

The wild American hops are the only variety of *Strobuli humuli* from which it has been found practicable to extract hopeine, which alkaloid they contain to the extent of about 0.15 per cent. on an average, whereas English hops only give 0.05 per cent. of pure hopeine crystals, and the German variety did not contain a percentage at all sufficient to admit of its employment.

At present chemical experiments on hopeine are still in progress, and the formula for the substance has not yet been discovered.

Pure hopeine appears in brilliant white needles about 1 cm. long, or as a crystalline white powder, a sample of which latter variety has been submitted to us by the Concentrated Produce Company, of 10 Camomile Street, E.C., who represent the patentees.

This powder has the characteristic smell of hops: it is scarcely soluble in water (according to one authority 800 parts of water at 15° C. are required for its solution), but it dissolves in 50 parts of alcohol at 15° C., communicating to the solution an intensely bitter taste.

The following is the *modus operandi* for obtaining hopeine from wild American hops:—The hops are strongly compressed and placed in a large copper cauldron, tinned inside, a 16-per-cent. solution of glucose and a little acetic acid being added, and the mixture left standing for about twenty-four hours, the solution completely permeating and covering the compressed hops. Fermentation is prevented by the hops themselves. The next stage of the process is to boil the hops with the solution under pressure for six hours, then to remove the liquid and to place the hops in a hydraulic press. The solution of glucose, which, during the process has absorbed the active principles of the hops, among them the hopeine, is then filtered through carbon and treated in vacuum-pans until the sugar has crystallised.

The hopeine is now extracted from the residue in an impure state by means of alcohol, the solution filtered and evaporated. After evaporation the substance is treated alternately with ether and with weak alkali water to remove the impurities, and finally the pure alkaloid is extracted by repeated solution and re-crystallisation from alcohol. It may be interesting to mention that the circumstances which led to the investigations concerning the alkaloid arose from the discovery that English beer which contained a large proportion of hops after concentration in a vacuum acted as a powerful narcotic. The experimenters at first endeavoured to obtain hopeine directly by subjecting hops to a treatment with alcohol; but this did not succeed because the alcohol extracted several other substances at the same time, and no isolation was afterwards possible.

The manufacture of hopeine is still in its infancy, and of a difficult and expensive nature, 1,000 to 2,000 lbs. of hops yielding only 1 lb. of hopeine, and until progress has been made in the direction of simplification the price of the alkaloid is not likely to be sensibly reduced. The hops after treatment do not, however, become absolutely valueless for brewing purposes, nor does the sugar used in the process.

Unsuccessful experiments have been made to obtain hopeine from lupuline.

Its extremely bitter taste renders hopeine difficult to administer unless in a disguised form, condensed beer, port wine, or sherry being best employed for this purpose.

The alkaloid acts with very strong effect, especially upon children, and should be administered with great caution.

Monthly Price Current.

The prices quoted in the following list are those actually obtained in Mining Lane for articles sold in bulk. Our Retail Subscribers must not expect to purchase at these market prices, but they may draw from them useful conclusions respecting the prices at which articles are offered by the Wholesale Firms.

CHEMICALS.

ACIDS—		s. d.	s. d.	s. d.	s. d.
Acetic	per lb.	0 24	0 0	0 24	0 0
pure	"	0 5	0 9	0 5	0 9
glacial	"	0 6	1 0	0 6	0 8
Benzoic Sublimate	"	0 0	3 6	0 0	3 6
Ex Gum	per oz.	0 6½	0 0	0 6	0 0
Citric	"	1 7	1 7½	1 10	2 0
Gallie	"	3 2	3 6	3 1	0 0
Hydrochloric	per cwt.	4 6	7 6	4 6	7 6
Nitric	per lb.	0 3	0 3½	0 3½	0 0
Oxalic	"	0 4	0 0	0 4	0 0
Sulphuric	"	0 0½	0 1	0 0½	0 0
Salicylic	"	6 9	9 6	6 9	9 6
Tannic	"	1 4	2 9	1 1	2 0
Tartaric, English	"	1 7½	0 0	1 7½	0 0
foreign	"	1 6½	0 0	1 6½	1 6½
ANTIMONY, crude	per cwt.	19 0	0 0	18 0	0 0
star	"	34 0	35 0	33 0	35 0
ARSENIC, lump	"	21 0	22 0	21 0	22 0
powder	"	10 9	0 0	10 9	0 0
BRIMSTONE, rough	"	8 0	8 6	8 0	8 6
roll	"	8 9	9 9	7 6	0 0
flour	"	10 0	12 6	8 10½	0 0
GLYCERINE, German	"	46 0	50 0	41 0	50 0
refined	"	37 6	42 6	0 0	0 0
crude brown	"	17 0	0 0	17 0	0 0
IODIFORM	per lb.	0 8½	0 9	0 9	0 0
IODINE, dry	per oz.	1 0	0 11½	1 0	0 11½
resublimed	"	0 10	1 4	1 3	1 4
MAGNESIA, calcined	per lb.	5 0	0 0	5 0	0 0
Hwds.	"	122 6	125 0	120 0	0 0
MERCURY	per bot.	2 11	0 0	3 0	0 0
PRECIPITATE, red	per lb.	2 9	0 0	2 11	0 0
white	"	1 8	2 0	1 8	2 0
PRUSSIAN BLUE	"	11 6	0 0	11 6	0 0
SANTONINE	"	10 0	0 0	10 0	0 0
SALICINE	"	35 0	0 0	35 0	0 0
THYMOL	"				
SALTS—					
Alum	per ton	115 0	0 0	110 0	0 0
powder	"	125 0	0 0	120 0	0 0
Ammonia	"	0 5	0 0	0 5	0 0
Carbonate	per lb.	0 5	0 0	0 5	0 0
Hydrochlorate,	"				
crude, white	per ton	560 0	640 0	540 0	640 0
Sulphate	"	230 0	240 0	210 0	220 0
Argol, Cape	per cwt.	83 0	96 0	85 0	100 0
Red	"	70 0	90 0	77 0	82 0
Oporto, red	"	33 0	42 0	0 0	9 0
Bleaching powder	"	7 3	7 6	7 3	7 6
Borax, British refined	"	30 0	32 6	30 0	32 0
Calomel	per lb.	2 6	0 0	2 8	0 0
Chloral hydrate	"	4 5	4 7	4 5	4 7
Liebreich's	"	5 6	6 0	5 6	6 0
Copper:					
Sulphate	per cwt.	14 9	15 0	14 9	15 0
Copperas, green	per ton	45 0	55 0	45 9	55 0
Corrosive Sublimate	per lb.	2 0	0 0	2 1	0 0
Cream Tartar, French	per cwt.	126 0	126 6	125 10	126 0
brown	"	109 0	0 0	109 0	0 0
Epsom Salts	"	3 6	4 0	3 6	4 0
Glauber Salts	"	3 6	5 0	3 6	5 0
Magnesia: Carbonate	"	40 0	0 0	39 0	40 0
Pond, Hwds.	"	72 0	0 0	72 0	0 0
Morphine Murias	"	4 6	5 0	4 6	5 0
Phosphorus	per lb.	2 3	2 4	2 3	2 4
Potash:	"				
Bichromate	"	0 3½	0 0	0 3½	0 0
Carbonate:	"				
Potashes, Canada,	"				
1st sort	per cwt.	29 0	0 0	29 0	0 0
Pearlashes, Canada,	"				
1st sort	"	46 0	46 6	46 0	46 6
Chlorate	per lb.	0 7½	0 0	0 6½	0 0
Prussiate	"	0 9½	0 10	0 7½	0 10
red	"	1 11	2 0	0 0	0 0
Sulphate	per cwt.	10 6	11 6	10 6	0 0
Potassium:	"				
Bromide	per lb.	1 5½	1 7	1 5½	1 7
Chloride	per cwt.	9 0	0 0	9 0	0 0
Iodide	per lb.	11 0	11 6	11 0	11 6
Quinine:	"				
Sulphate, British, in	"				
bottles	per oz.	3 6	0 0	3 4	0 0
Sulphate, French	"	3 3	0 0	3 2	0 0
Sulphate, German	"	3 0	0 0	2 10	0 0
Sal Acetos	per lb.	0 8	0 8½	0 6½	0 7
Sal Ammoniac, British	per cwt.	33 0	38 0	35 0	37 0
Saltpetre:	"				
Bengal, 6 per cent. or	"	16 3	0 0	16 3	0 0
under	"				

Saltpetre:—(cont.)

Bengal, over 6 per cent.	per cwt.	0 0	0 0	0 0	0 0
British, refined	"	21 6	22 6	21 6	22 6
Soda: Bicarbonate	"	7 9	0 0	7 9	0 0
Hwds.	"	45 0	0 0	45 0	0 0
Carbonate:	"	"	"	"	"
Soda Ash	per deg.	0 1½	0 0	0 1½	0 1½
Soda Crystals	per cwt.	2 7	0 0	2 8	0 0
Caustic	"	8 9	9 0	8 9	9 0
Hyposulphite	"	8 0	8 6	8 0	8 6
Nitrate	"	10 3	10 9	11 5	0 0
Zinc Sulphate	"	12 0	14 0	8 6	8 9
SUGAR OF LEAD, White	"	30 0	34 0	30 0	34 0
Brown	"	26 6	0 0	26 6	0 0
VERDIGRIS	per lb.	0 9	0 10½	0 0	0 0
VERMILION, English	"	2 0	0 0	2 0	0 0
China	"	2 2	0 0	2 2	0 0

DRUGS.

ALOE, Hepatic.	per cwt.	60 0	140 0	60 0	120 0
Socotrine	"	80 0	160 0	80 0	160 0
Cape, good	"	27 6	35 6	28 0	30 0
inferior	"	25 0	30 0	21 0	27 0
Barbados	"	40 0	120 0	40 0	120 0
Curaçoa	"	30 0	80 0	30 0	80 0
AMBERGRIS, grey	per oz.	75 0	99 0	80 0	99 0
BALSA—					
Canada	per lb.	1 3	1 6	1 5	1 8
Cajapi	"	1 6	1 7	1 5½	1 6½
Peru	"	6 6	7 0	5 3	5 6
Tolu	"	1 5	1 6	1 8	1 9
BARK—					
Canella alba	per cwt.	27 6	30 0	32 6	40 0
Cascarilla	"	28 0	35 0	26 6	29 0
CINCHONA—					
Peru, grey	per lb.	0 6	1 6	0 4	1 6
Calisaya, all kinds	"	0 4	2 9	0 4	2 9
Ledgeriana	"	0 5	4 0	0 5	4 0
Cartagena	"	0 3	1 2	0 0	0 0
Columbian	"	0 6	1 2	0 0	0 0
Cuprea	"	0 3	1 3	0 2	2 5
New Granada	"	0 6	1 10	0 0	0 0
Pitayo & Maracabo	"	0 6	1 1	0 3	1 1
Red	"	1 6	6 0	1 4	6 0
East India, crown	"	0 4	2 4	0 4	3 4
red	"	0 4	2 6	0 1½	2 7
BUCHU LEAVES	"	0 2	1 0	0 2	1 0
CAMPHOR, China	per cwt.	71 0	75 0	0 0	0 0
Japan	"	71 0	75 0	75 0	80 0
Refin. Eng.	per lb.	1 1	0 0	1 1	0 0
Tablets	"	1 1	1 2	1 1½	1 6
CANTHARIDES, China	"	4 0	4 6	5 6	6 0
Russian	"	10 0	0 0	9 0	9 6
CAMOMILE FLOWERS	per cwt.	70 0	71 0	30 0	60 0
CASTOREUM	per lb.	24 0	35 0	30 0	40 0
CHIRETTA	"	0 4	0 0	0 3	0 4
COCA LEAVES	"	0 7½	0 10	1 3	2 0
DRAGON'S BLOOD, Ip.	per cwt.	70 0	240 0	80 0	240 0
ERGOT OF RYE	per lb.	0 8	1 0	0 11½	1 5
FRUITS & SEEDS (see also Seeds and Spices)					
Anise, China Star	per cwt.	92 6	95 0	85 0	90 0
Russian	"	27 6	33 0	27 6	33 0
Beans, Tonquin	per lb.	2 0	4 0	2 6	5 0
Cardamoms, Malabar, good	"	3 6	4 6	3 0	4 0
inferior	"	1 9	2 9	1 9	2 9
Aleppy	"	2 0	3 0	1 3	2 4
Madras	"	1 6	3 6	1 3	2 2
Ceylon, long	"	0 0	0 0	0 0	0 0
Malabar sorts	"	1 0	4 0	1 6	4 5
Cocculus Indicus	per cwt.	11 0	13 0	9 0	13 6
Colocyath, apple	per lb.	0 10	1 3	0 11	1 6
Cubebs	per cwt.	320 0	340 0	300 0	320 0
Cummin	"	30 0	34 0	0 0	0 0
Fenugreek	"	10 0	12 0	3 9	5 0
Juniper Berries	"	15 0	17 6	0 0	0 0
Nux Vomica	"	7 6	10 0	9 0	11 6
Tamarinds, E. India	"	6 0	9 0	13 0	15 6
W. India	"	9 0	12 0	9 0	15 6
Vanilla, large	per lb.	17 0	20 0	16 0	22 0
inferior	"	5 0	12 0	5 0	12 0
FLOWERS—Dalmatian	"	60 0	90 0	60 0	90 0
Caneasian	"	95 0	0 0	95 0	0 0
HONEY, Chili	per cwt.	0 0	0 0	0 0	0 0
Jamaica	"	25 0	35 0	27 0	32 0
IPERCACUANHA	per lb.	2 10	4 0	2 11	3 11
ISINGLASS, Brazil	"	2 0	4 3	2 4	4 3
Tongue sort	"	1 0	5 0	1 7	4 6
East India	"	1 0	4 6	0 10	3 2
West India	"	2 9	3 10	2 0	2 9
Russ. leaf	"	7 0	10 0	8 0	11 6
Simovia	"	2 2	2 4	0 0	0 0
JALAP, good	"	0 7	0 9	0 6½	0 7½
infer. and stems	"	0 6	0 7	0 5½	0 6
LEMON JUICE, f.o.b.	per pipe	460 0	0 0	483 0	503 0
Messina	per gall.	1 8	0 0	1 8	0 0
LIME JUICE	per cwt.	55 0	100 0	55 0	100 0
LIQUORICE, Spanish	"	12 0	20 0	12 0	20 0
Liquorice Root	"	4 6	5 0	7 6	8 6
MANNA, flaky	per lb.	75 0	87 6	62 6	77 0
MUSK, Tonquin pod	per oz.	50 0	90 0	50 0	95 0
Grain	"	30 0	40 0	32 0	35 0
Yunan pod	"	"	"	"	"
OILS (see also separate list)					
Almond, expressed	per lb.	1 3	1 5	1 3	0 0
Castor, 1st pale	"	0 4	0 0	0 4	0 0

Oils:—(cont.)

		Last Month		This Month	
		s. d.	s. d.	s. d.	s. d.
Castor, second	per lb.	0 31..	0 31	0 31..	0 31
Cod-liver	per gall.	3 6..	5 0	3 6..	5 0
Essential Oils:					
Almond	per lb.	25 0 to	0 0	25 0 to	0 0
Anise-seed, star	"	6 9..	6 10	6 9..	6 10
" German, &c.	"	8 0..	13 0	8 0..	13 0
Bergamot	"	5 0..	5 6	5 0..	5 6
Cajeput	per bot.	3 3..	0 0	3 3..	3 4
Caraway	per lb.	7 6..	11 0	5 3..	5 6
Cassia	"	3 7..	3 8	3 6..	3 7
Cinnamon	per oz.	2 0..	3 6	1 6..	3 6
Cinnamon-leaf	"	0 21..	0 0	0 2..	0 21
Citronelle	"	0 01..	0 1	0 1..	0 1
Clove	per lb.	3 3..	3 6	3 6..	0 0
Juniper	"	1 6..	2 0	1 6..	1 9
Lavender, Exotic	"	6 6..	7 6	6 6..	7 6
" Mitcham	"	40 0..	50 0	40 0..	50 0
Lemon	"	3 6..	5 6	3 6..	5 6
Lemongrass	per oz.	0 1..	0 11	0 11..	0 11
Neroli	"	7 0..	0 0	7 0..	0 0
Nutmeg	"	0 8..	0 0	0 8..	0 0
Orange	per lb.	8 0..	10 0	8 0..	10 0
Otto of Roses	per oz.	12 6..	29 6	13 0..	22 0
Patchouli	"	0 0..	0 0	0 0..	0 0
Peppermint: American	per lb.	12 0..	12 6	12 0..	12 6
(H. G. Hotchkiss)	"	18 6..	0 0	17 6..	13 6
English	"	28 0..	35 0	28 0..	29 6
" (Jackson)	"	37 0..	45 0	37 0..	45 0
Japan	"	11 0..	15 0	10 0..	12 0
Menthol crystals	"	25 0..	28 0	22 6..	25 0
Rosmary	"	2 6..	3 9	3 0..	3 9
Sassafras	"	2 6..	0 0	0 0..	0 0
Spearmint	"	12 0..	14 0	12 0..	14 0
Thyme	"	2 6..	0 0	1 9..	2 3
Mace, expressed	per oz.	0 2..	0 0	0 2..	0 0
OPUM, Turkey	per lb.	12 6..	15 0	11 6..	15 0
" inferior	"	10 0..	12 0	9 0..	11 0
QUASSIA (bitter wood)	per ton	120 0..	0 0	90 0..	95 0
RHUBARB, China, good	per lb.	2 3..	3 9	2 5..	4 0
and fine	"	1 3..	2 0	1 3..	2 4
Middling to fair	"	25 0..	60 0	20 0..	60 0
ROOTS—Calumba	per ewt.	22 0..	27 0	0 0..	0 0
China	"	0 0..	0 0	28 0..	30 0
Cus-Cus	"	15 0..	18 0	11 0..	12 6
Galangal	"	20 0..	24 0	0 0..	0 0
Gentian	"	25 0..	40 0	25 0..	40 0
Orris	"	63 0..	80 0	68 0..	80 0
Pellitory	"	2 0..	0 0	2 0..	3 2
Pink	per lb.	0 9..	1 0	0 6..	1 2
Rhatany	"	2 4..	2 6	2 2..	2 3
Seneka	"	2 0..	3 0	3 0..	3 4
Snake	"	41 0..	45 0	50 0..	52 0
SAFFRON, Valencia	"	27 0..	31 6	27 0..	31 6
Alicante	"	0 6..	0 9	0 6..	0 9
SARSAPARILLA, Lima	"	1 2..	1 5	1 2..	1 5
Guayaquil	"	1 7..	2 0	1 7..	1 11
Honduras	"	1 7..	2 0	1 9..	2 0
Jamaica	"	0 0..	0 0	0 0..	0 0
SASSAFRAS	per ewt.	28 0..	32 0	20 0..	26 0
SCAMONY, Virgin	per lb.	10 0..	24 6	8 0..	19 0
second and ordinary	"	0 21..	0 0	0 11..	0 3
SENNA, Bombay	"	0 3..	1 0	0 11..	0 10
Thinivelly	"	0 6..	1 0	0 2..	1 6
Alexandria	"	1 3..	0 0	1 8..	1 9
SERAPICETI, refined	"	0 101..	0 0	2 0..	0 0
American	"	0 1..	0 21	0 21..	0 31
SOUTHS	"	£ s. d.	£ s. d.	£ s. d.	£ s. d.
AMMONIAC, drop	per ewt.	2 5..	2 10	2 4..	3 0
ANIMI, fine washed	"	14 10..	16 0	14 10..	16 0
sorts	"	11 0..	14 0	4 10..	14 0
ARABIC, pale picked	"	2 15..	3 10	2 0..	5 0
sorts, mid. to fine	"	1 10..	2 6	2 0..	5 0
TURKEY, pick. gd. to fin.	"	9 0..	15 0	11 0..	17 0
second & inferior	"	7 0..	8 10	5 0..	10 0
sorts	"	6 0..	7 5	9 0..	11 10
ASAFOETIDA, cm. to fin.	"	1 10..	3 0	2 0..	3 15
BENJAMIN, Siam, 1st	"	14 0..	30 0	14 0..	24 0
& 2nd	"	5 0..	10 0	4 0..	8 0
Sumatra	"	s. d.	s. d.	s. d.	s. d.
COPAL, Manila	"	15 0..	75 0	15 0..	75 0
Angola, red	"	145 0..	152 6	145 0..	152 6
DAMAR, pale	"	75 0..	80 0	70 0..	80 0
EUPHORIUM	"	10 0..	15 0	12 6..	20 0
GALBANUM	per lb.	0 3..	0 10	0 3..	0 10
GAMBAGE, picked pipe	per ewt.	240 0..	280 0	210 0..	260 0
GUAIACUM	per lb.	0 6..	2 1	0 9..	1 10
KISO	per ewt.	40 0..	55 0	45 0..	50 0
KOWHIE, sorts	"	30 0..	50 0	30 0..	50 0
selected	"	110 0..	200 0	110 0..	200 0
MASTIC, picked	per lb.	2 9..	3 3	2 9..	3 3
MYRRH, good and fine	per ewt.	100 0..	150 0	97 6..	150 0
ordinary to fair	"	80 0..	140 0	70 0..	95 0
OLIBANUM, p. drop	"	35 0..	50 0	45 0..	50 0
amber and yellow	"	29 0..	37 0	32 0..	45 0
SENEGAL	"	40 0..	45 0	40 0..	45 0
SANDARAC	"	60 0..	105 0	60 0..	85 0
SHELLAC, Orange	"	64 0..	85 0	57 0..	77 0
LIVER	"	58 0..	63 0	53 0..	56 0
THUS	"	25 0..	0 0	15 0..	25 0
TRAGACANTH, leaf	"	140 0..	280 0	200 0..	300 0
in sorts	"	20 0..	180 0	40 0..	195 0
OILS.	"	£ s. d.	£ s. d.	£ s. d.	£ s. d.
SEAL pale	per tun	25 0..	26 0	25 0..	26 0

Oils:—(cont.)

SEAL, yellow to tinged..	per tun	23 0 to	24 10	23 0 to	24 0
brown	"	20 0..	22 0	22 0..	0 0
SPERM	"	51 0..	52 0	55 0..	56 0
COD	"	33 0..	35 0	31 0..	0 0
WHALE, South Sea, pale	"	21 0..	23 0	20 0..	21 0
yellow	"	19 0..	20 0	17 0..	18 0
brown	"	15 0..	18 0	14 0..	16 0
Sardine	"	25 0..	27 0	25 0..	27 0
OLIVE, Seville	per ton	40 0..	41 0	0 0..	0 0
Gioja	"	36 0..	37 0	36 0..	37 0
Levant	"	35 0..	36 0	0 0..	0 0
Mogador	"	35 10..	36 0	35 10..	36 0
Spanish	"	40 0..	40 10	40 0..	40 10
Sicily	"	38 0..	0 0	0 0..	0 0
COCOANUT, Cokim	"	30 10..	31 0	29 10..	30 0
Ceylon	"	27 0..	28 0	26 0..	0 0
Mauritius ..	"	28 5..	0 0	0 0..	0 0
PALM, fine	"	29 0..	0 0	29 10..	0 0
LINSEED	"	22 7/6..	22 10	19 5..	19 15
RAPESEED, English, pale	"	24 0..	0 0	23 0..	0 0
brown	"	22 0..	0 0	21 5..	21 10
COTTONSEED	"	19 0..	21 0	17 10..	19 0
LARD	"	35 10..	37 0	35 0..	36 0
TALLOW	"	25 0..	40 0	25 0..	40 0
TURPENTINE, American	per ewt.	s. d.	s. d.	s. d.	s. d.
PETROLEUM, refined....	per gall.	0 7 1/2..	0 7 1/2	0 7 1/2..	0 7 1/2
Spirit	"	0 6 1/2..	0 7 1/2	0 6 1/2..	0 7 1/2
SEEDS.					
CANARY	per qr.	44 0..	62 0	44 0..	62 0
CARAWAY, English	per ewt.	0 0..	0 0	0 0..	0 0
German, &c.	"	36 0..	47 0	36 0..	47 0
CORIANDER	"	14 0..	19 0	14 0..	19 0
HEMP	per qr.	38 0..	0 0	38 0..	0 0
LINSEED, English	"	42 6..	0 0	42 6..	0 0
Black Sea & Azof	"	40 0..	0 0	40 0..	0 0
Calcutta	"	43 6..	43 9	41 6..	0 0
Bombay	"	45 0..	0 0	43 0..	0 0
St. Petersburg ..	"	35 0..	38 0	35 0..	38 0
MUSTARD, brown	per bush.	10 0..	12 0	10 0..	12 0
white	"	7 6..	9 6	7 6..	9 6
POPPY, East India	per qr.	36 0..	0 0	35 0..	0 0
SPICES.					
CASSIA LIGNEA	per ewt.	29 0..	0 0	27 6..	22 0
Vera	"	19 0..	25 0	19 0..	25 0
Buds	"	42 0..	43 0	42 0..	43 0
CINNAMON, Ceylon:					
1st quality	per lb.	0 8 1/2..	1 10	0 9 1/2..	1 9
2nd ditto	"	0 7..	1 7	0 8..	1 6
3rd ditto	"	0 6..	1 1	0 7..	1 1
Tellicherry	"	0 0..	0 0	0 0..	0 0
Chips	"	0 1 1/2..	0 3	0 2..	0 3 1/2
CLOVES, Penang	"	0 9 1/2..	1 0	0 9 1/2..	1 0
Amboyna	"	0 6 1/2..	0 8	0 7..	0 9
Zanzibar	"	0 5 1/2..	0 5 1/2	0 6 1/2..	0 0
GINGER, Jam., fine	per ewt.	75 0..	200 0	75 0..	200 0
Ord. to good	"	38 0..	70 0	38 0..	70 0
African	"	30 0..	35 0	30 0..	35 0
Bengal	"	21 0..	30 0	22 6..	0 0
Malabar	"	0 0..	0 0	0 0..	0 0
Cochin	"	34 0..	105 0	33 0..	113 0
PEPPER, Black, Malabar	per lb.	0 7 1/2..	0 8	0 8 1/2..	0 8 1/2
Singapore	"	0 7..	0 7 1/2	0 7..	0 7 1/2
White	"	0 9 1/2..	0 10 1/2	0 11..	1 0 1/2
Cayenne	"	1 2..	1 8	1 2..	1 8
MACE, 1st quality	"	1 4..	2 0	1 4..	2 6
2nd and inferior....	"	1 1..	1 2	1 2..	1 3
NUTMEGS, 78 to 60 to lb.	"	2 4 1/2..	3 8	2 1 1/2..	3 5
90 80	"	2 3..	2 5	1 9 1/2..	2 1 1/2
132 95	"	1 7..	2 3	1 5..	1 9
PIMENTA	"	0 2 1/2..	0 3 1/2	0 2 1/2..	0 3
VARIOUS PRODUCTS.					
COCHINEAL—					
Honduras, black	per lb.	1 6..	1 10 1/2	1 6..	1 10 1/2
silver	"	1 4..	1 7	1 3..	1 6
Mexican, black	"	1 4..	1 9	1 4..	1 9
silver	"	1 4..	1 6	1 3..	1 5
Teneriffe, black	"	1 6..	2 0	1 4..	1 7
silver	"	1 4..	1 6	1 3..	1 3 1/2
GALLS, Tky blue	"	49 0..	55 0	54 0..	57 6
China	"	45 0..	48 6	70 0..	0 0
INDIGO, Bengal	"	1 9..	6 7	1 9..	6 7
Madras	"	0 5..	3 4	0 5..	3 4
Kurpah	"	0 10..	4 9	0 10..	4 9
Oude	"	1 0..	5 0	1 0..	5 0
Guatemala	"	1 3..	5 8	1 3..	5 8
ROSIN, American	per ewt.	3 9..	10 0	3 6..	10 0
SOAP, Castile	"	28 0..	0 0	28 0..	0 0
SOY, China	per gall.	1 5..	0 0	1 4..	1 5
WAX, BEES, English	per ewt.	40 0..	40 0	40 0..	40 0
Jamaica	"	6 15..	7 10	6 15..	8 0
East India	"	6 0..	7 12 1/2	5 5..	6 17 1/2
VEGETABLE, Japan	per lb.	43 15..	44 0	43 2 1/2..	43 3
Paraffin	"	0 4..	0 6	0 4..	0 5
WOOD, DYE, Bar	per ton	43 5..	43 10	43 10..	43 15
Brazil	"	7 0..	18 0	7 0..	18 0
Cam	"	16 0..	30 0	16 0..	30 0
Fustie, Cuba	"	4 0..	6 0	4 0..	6 0
Jamaica	"	4 5..	5 15	4 0..	6 0
Logwood, Campeachy	"	7 10..	8 5	6 15..	8 10
Jamaica	"	5 0..	5 10	4 15..	5 15
LIMA, first pile	"	8 5..	8 10	8 5..	0 0
RED SANDARS	"	5/17/6..	6 0	5 15..	0 0



North British Branch of the Pharmaceutical Society.

SIR,—There are some remarks on the North British Branch in the *Pharmaceutical Journal* of Saturday last which may not have received the attention they deserve, especially in England, where the subject does not possess the same interest which it does here. They occur in the review of the year 1885. The writer is anticipating the passing of the by-laws, and pointing out how the division of the examinations may lead to the formation of local organisations. Considering that the written examination will only require a superintendent, as the Preliminary examinations do at present, the inference is not apparent; but it is made the occasion of introducing the North British Branch as a type of such bodies—as a model organisation, in fact—and then follow seven columns of what can only be mildly called a strong *ex parte* statement of the case against the said branch. I do not intend to attempt a reply to this statement, or to make any remark on the unique position which it occupies in the heart of an historical review of the year. There may be reasons for that. I consider that it has been replied to by anticipation—for there is nothing new in it—by Mr. Stephenson last May in a letter, and by Mr. Baidon in an address quite recently. Both these gentlemen have stated the ease with great moderation and effectiveness. Their statements are on record, and it is for them, if they think proper, to reply to this new statement. I wish merely to express my sheer amazement at the tone and scope of the whole article, and the irrelevance of great part of it. For instance, what possible bearing on the case can the quibble about the want of evidence as to the circumstances attending the origin of the Scottish Board of Examiners have? All that has been stated is abundantly vouched, and the very existence of the Board is sufficient evidence of the facts as stated. Then what is the use of recounting and reiterating the acts of friendship and liberality of former Presidents and Councils, except to emphasise the fact that the present President and Council have made a new departure? And what purpose is served by reviving that miserable squabble of Mr. Fairlie in 1871, when that individual called in question the validity of the title and functions of the Council of the branch, except to show that the Council of the Society in their recent action are following in the very footsteps of a man whose subsequent history revealed him as unscrupulous and unprincipled even to the length of criminality? Above all, what can be the effect of introducing John Mackay's name as an authority in repudiating a claim which we repudiate, and have repudiated in the same sense as he did, and which no one has ever maintained? And what are we to think of the bespattering his honoured name with fulsome eulogium in the proper regulation form, and supported by the ponderous testimony of the inevitable Mr. Young, while all the while deriding and destroying the work which lay nearest his heart? I say, what can be the effect of this but the rousing of disgust and indignation in the breasts of those who valued and respected him most?

Sir, I would like to know what is to be the end of all this. I mentioned that this article had been conceived in the moment of anticipated victory, when the new by-laws would enable the Council to work its sweet will on the North British Branch. Surely in such a moment propriety and dignity might have dictated moderation of language and sentiment; and, besides, if the model organisation is to exist at all, surely it is madness to take such pains to estrange and exasperate those who must be its members. I see how it is—we are to be scolded into submission. The model organisation is to be conducted on the principle of a conquered province. Rather a risky proceeding, I should say, in a voluntary society like ours. They say Scottish blood flows in the veins of the editor of your contemporary. Has he forgotten the elementary history of his country? or does he despise the teachings of history? Because, if there is one characteristic of Scotland more marked than another, it is this: That it has always been found impossible to tamper with her national independence.

SCOTUS.

Chemists' Book-keeping.

To the Chemist and Druggist—

SIR,—I have found Silverlock's "Johnson's Compendium" (3s. 6d.) a very convenient method of keeping accounts. I have had a long experience as assistant and have found few chemists who can keep books in a satisfactory manner. In the first place, they must not mind putting down a few figures: it is a trouble that pays, especially if a man wants to sell his business. The entries should be made daily, when the cash is reckoned; it takes very little time, and soon becomes a regular matter of course. Some chemists to find their returns add up the amounts booked to customers during the week, then add the cash taken in the same time (including the bills paid by customers), thus reckoning the booking-entries twice—once as booking, once as cash. Persons buying businesses require to look sharp after this style of book-keeping.

I balance my cash weekly, showing on one side daily cash receipts and bills paid separately; and, on the other side, all household and business expenses paid out in cash as well as money paid into bank. For this I use a 47. memorandum-book, ruled for cash entries, which I keep in the cash-box. My system requires the following books:—Day-book, ledger cash memorandum-book, wholesale ledger, and "Johnson's Compendium," also bank-book. It is most convenient for a man even in a small way to have a banking account, and pay for all goods, where possible, by cheque. The banks make a small charge unless a balance of 30% or 40% is kept, but the convenience is worth paying for.

All wholesale accounts I pay monthly by cheque. Petty items—rates, taxes, gas, insurance, housekeeping—I pay out of cash; also wages, except assistant's salary. All accounts owing to me are sent out quarterly, day-book posted into ledger every few days, all accounts when paid by customers are credited by an entry in day-book before the bill is receipted. If at the end of each quarter I want to know how I stand, it is done in a short time, thus:—I turn to wholesale ledger, and add up all accounts owing by me. Then add up the totals of all customers' accounts (which are all made out every quarter), add what cash balance there may be in the bank and in hand, to the amount. The difference between that amount and the sum of the wholesale accounts shows my position as regards money. As regards stock, that can only be done by stocktaking and pricing out in the usual manner.

If this is any use to a brother-druggist, I shall be glad.

Yours truly,

A COUNTRY DRUGGIST. (86/47.)

Chemists' Book-keeping.

Mr. W. H. Tunley, Southsea, sends a scheme for book which he has used for years. Of course it does not take the place of a set of books, but it shows at a glance the money received and paid out every day, week, month, and year.

The last column on the right does well for special account mentioned by your second correspondent.

Day	Date	Cash Received			Paid Out			Memo.
		Accounts Paid in	Cash	Totals	Stock	Other Expenses	Totals	
Mon.	1		Day's taking			Such as carriage, taxes, wages, &c.		
Tue.	2							
Wed.	3							
Th.	4							
Fri.	5							
Sat.	6							
Totals	..							

At the end of each week add; also at the end of each month add up the week's totals, and copy the items on a page ruled as above. Then, at the end of the year, you get the grand totals by adding up twelve lines.

Irish Pharmaceutical Examination.

To the Chemist and Druggist—

SIR,—In your issue of December I notice a letter from Mr. W. H. Madden, in which he gives an outline of the pharmacy (theoretical and practical) part of the Irish Pharmaceutical examination with the hope that some of the licentiates will take up the other subjects. I would, therefore with your permission, give a short account of these, so far as I was concerned, omitting minor details.

(1.) *Volumetric Analysis.*—The examiner, Dr. Davy, began by asking me to state what I knew about volumetric analysis. Having done so, he handed me a bottle containing liq. ammoniac, and told me to proceed, noting the quantities I used, so that I could make my calculations afterwards. He then gave liq. sodæ chlorinatæ, asked what volumetric sol. I required, and if I wanted anything else. Having satisfied him on this point, I proceeded, and afterwards made my calculations.

(2.) I was then given about 1 grain of a white powder from a bottle marked C, told it was an alkaloid, and on putting it to the test I found it to be strychnine. Another small portion from a bottle marked D I found to be quinine. I was not allowed the bottles in my hand, nor did I see their contents except the small portions given me. This second part of the subject only lasted five minutes, the examiner remarking I had done very well.

(3.) *Qualitative Analysis.*—A bottle containing about 1 pint of a clear solution was then given. I asked if it contained a single salt or a mixture. This information was not given. I soon found, however, that it contained magnes. sulph. only. I was told that I was correct. Next a white powder resembling calomel or bismuth; found it to be the nitrate of bismuth.

I was then taken aside and asked a series of questions, of which the following are a few:—If on the addition of HCl I got no ppt., what would I infer? If a ppt., what then, and how would I ascertain what it was? What metals are pptd. by H₂S from an acid solution? If mercury is pptd. by HCl, in what form must it have been? Is lead wholly pptd. by HCl? How would I separate barium and calcium, and how would I recognise them? Answers to questions such as these at once show the extent of the knowledge of the candidate. With regard to the written paper, I will only say that some of the questions were of a like nature to those found in the advanced stage of the Science and Art Department, while others related to the chemical compounds of the B.P., such as, How is antim. tart. made, and express in chemical symbols the changes which take place.

(4.) *Botany and Materia Medica.*—In this subject (only one candidate was in the room with the examiner at the same time) I was handed a flower with part of the stem and a few leaves; asked to describe it in botanical language, point out its different parts, and refer it to its natural order; also the following questions:—What are concentric rings, and where are they found? What do you understand by dicotyledon and monocotyledon? What is a phylloid? Of what is the pistil composed? What part is called the style, what the stigma? Mention some of the internal arrangements of the ovary. What is a capitulum? Of what does a complete flower consist? I was then shown a single (dry) leaf, asked to describe it, say what it was, give its preparations with strength and dose of each. Also describe, give dose and preparations, of kino, catechu, cinnamon, and rhatany. I was also asked to describe the symptoms of an over-dose of opium, and what should be done in such a case, and, if there was an antidote, state how and in what quantity it should be administered.

At no time during the examination was there the slightest opportunity for one candidate to consult another, much less books, on the subjects in which he was examined. It seemed to me that the desire of the examiners was to test the general knowledge of the candidate; hence the series of questions asked in addition to the written papers. If all the proceedings of the Society were conducted on the same principle as the examinations, it would be better for the licentiate.

Belfast.

Yours, &c.,

DAVID STRANAGHAN.

Menthol and its Introducers.

To the Chemist and Druggist—

SIR,—In the issue of your valuable paper dated September 15 last you insert a paragraph wherein Mr. Shirley claims to have been the first to introduce menthol into England. We cannot help thinking there must be some mistake in the wording of this paragraph.

We thought it was so well known and recognised among the trade all over the world that we were the first to introduce menthol as a commercial article, that we have never even considered it necessary to refer to the matter before in a definite way, except in private circulars.

Our further silence may, however, perhaps encourage other claimants to come forward, and we must apologise for occupying your space for the purpose of placing on record once for all our absolute claim as the first introducers of the article now so well known as "Japan Menthol Crystals."

It is hardly necessary for us to go into the full details of the history of the article, but, so far as interests the trade, may mention that after many previous trials, even up to 1877, the article was not known, as the following extract of a letter dated March 1, 1878, from one of our correspondents in London will show. This was referring to a shipment we made in 1877. So little, in fact, was the article known that our friends actually returned the goods to us, saying:—

"We cannot find anyone who uses the peppermint in the crystallised form; in fact, such an article is looked upon more as a *curiosity* than a *marketable product*."

However, we still persevered, and mustered sufficient courage to ship some more, and in our letter accompanying another attempt we say:—"We invoice it as *Cocking's Japan menthol crystals*, by which name we should like it sold. . . . We intend to have the article extensively advertised, so that it will become well known among the trade. *It is well worth it*, as our quality is quite a special article of our own," &c.

The final result was apparently that someone was found who used the peppermint in its crystallised form, and, if we remember aright, Mr. Shirley was also an early customer for our menthol. We, therefore, presume that if any claim in priority is put forward at all in connection with menthol it must only be as a consumer of our menthol and maker of "cones." Upon this latter matter we are hardly in a position to speak, as it has been our well-defined policy, from the very first, to strictly confine ourselves to the manufacture of menthol, leaving the putting of it up in "cones" and "pencils" as a specialty of others.

We remain, yours truly,
COCKING & Co.

Yokohama, Japan, November 26, 1885.

Menthol and its Virtues.

To the Chemist and Druggist—

SIR,—Many people still doubt the efficacy of menthol as a local application in bilious headache. Though not a cure, it certainly may be made to greatly assist internal remedies.

Our method is as follows:—

Place a few drops of lavender water or other spirit in the hand, and moisten the surface of the cone therewith previously to applying it to the affected parts.

By this means the action is more rapid and much increased. We think it would be advantageous to have something of this sort printed on the ordinary menthol cone labels. It certainly would be for the manufacturers, as the cones would disappear much more quickly.

January 4.

Yours, &c.,
C. & S.

[The writers of this letter are not the same as the writers of the preceding communication.—ED. C. & D.]

The Patent Medicine Stamp.

To the Chemist and Druggist—

SIR,—Referring to the paragraph in a recent issue of THE CHEMIST AND DRUGGIST, in connection with chemists' labels, we think the enclosed correspondence may prove of interest and possibly of advantage to the trade generally.

Probably the simplest way out of the difficulty would be to sell pennyworths of pills in such a way that the only pro-

proprietary right might remain with the purchaser. In other words, induce him to swallow the pills on the spot, and then it will be needless to deliver them "in a packet, box, bottle, or other enclosure."

It would probably be deemed unnecessary to affix a stamp to the purchaser (!).

Yours, with compliments,
London, January 8. F. NEWBERRY & SONS.

(Copy of Correspondence.)

Solicitors' Department, Somerset House,
London, W.C., December 5, 1885.

GENTLEMEN,—In reply to your letter of the 2nd inst., I have to inform you that any public notice or advertisement which holds out a medicine to the public as a proprietary medicine, or a specific, would thereby render the medicine liable to stamp duty. If your correspondent exhibits an ornamental vase in his shop-window with the words "Smith's Cough Lozenges" upon it, every box of such lozenges that he sells must bear the proper medicine-duty stamp. It is not necessary to affix a stamp to the vase.

I am, gentlemen, your obedient servant,
W. H. MELVILL,
Solicitor of Inland Revenue.

Messrs. Newbery & Sons.

Solicitor to Inland Revenue, Somerset House, W.C.

SIR,—Your reply of 5th inst. was duly received and contents noted.

We find that a communication on the subject of labelled show-vases was addressed to you by us on November 23, 1881, to which we would ask you to refer. It was then evident from your reply that chemists would incur no liability for selling pennyworths of pills from a show-vase labelled "Brown's Soluble Sugar-coated Compound Rhubarb Pills," and, consequently, several hundreds of such labelled vases have been supplied to chemists in all parts of the kingdom. From communications lately addressed to us by certain chemists having such vases, we are led to infer that some liability is (now) incurred if a pennyworth of pills be supplied from such a vase, even if no proprietary right be implied by the wording of the label attached to the box containing the "pennyworth" sold. As this matter is one of considerable importance to our customers and to ourselves, we would ask your attention to your reply to ours of November 23, 1881, and for your present definition of the law as affecting small sales made from the vases in question.

We are, dear sir, yours faithfully,
December 19, 1885. F. NEWBERRY & SONS.

Solicitors' Department, Somerset House,
London, W.C., December 23, 1885.

GENTLEMEN,—In reply to your letter of the 19th inst., I have to inform you that pills can be taken from a vase labelled as described by you, and sold in pennyworths, without becoming liable to medicine-stamp duty, provided they are not enclosed in a packet, box, bottle, or other enclosure.

As far as my recollection serves me, the letter of November 24, 1881, was written after an interview at this department with your representative, in which the matter was explained.

I am, gentlemen, your obedient servant,
W. H. MELVILL,
Solicitor of Inland Revenue.
Messrs. Newbery & Sons, Newgate Street.

Solicitor to Inland Revenue, Somerset House.

DEAR SIR,—We thank you for yours of 23rd inst., but would say that we do not appear in any instance to have made a personal inquiry, or had an interview with you, in respect of the named vases.

If we rightly understand the matter, a chemist may expose a vase labelled "Smith's Cough Lozenges," or "Brown's Compound Rhubarb Pills," without stamping such vase; and he may sell pennyworths of such pills—in respect of which a *primæ facie* proprietary right may be said to be claimed by the possessive term "Smith's"—without payment of any duty, provided he do not deliver the pills or lozenges in any enclosure. Now we have to inquire whether the twisting up into plain paper of, say, three or four pills or lozenges, sold over a

counter for a penny, would be considered as "enclosing" them "in a packet, box, bottle, or other enclosure." This is a point of considerable importance to retail chemists all over the kingdom, and we should feel obliged for your early reply. It appears to us that chemists, by exposing such named vases as those in question, have, all unsuspectingly, laid a trap for themselves.

We are, dear sir, faithfully yours,
December 24, 1885. F. NEWBERRY & SONS.

Solicitors' Department, Somerset House,
London, W.C., December 29, 1885.

GENTLEMEN,—In reply to your letter of the 24th inst., I have to inform you that pills and lozenges sold in the manner therein described would not be liable to medicine stamp duty.

I am, gentlemen, your obedient servant,
W. H. MELVILL,
Solicitor of Inland Revenue.

Messrs. Newbery & Sons.

Tinctura Camphoræ Composita.

To the Chemist and Druggist—

SIR,—Among the various criticisms which have been launched forth on the British Pharmacopœia, 1885, I have seen no comment made upon the formula for tinct. camph. co., which has been admitted into the revised edition without any alteration. Chemists are, no doubt, pleased to find the old round-about method of preparing acid. sulph. aromat. replaced by a new formula, which produces this preparation "right away," as our Yankee friends would put it. Could not the compilers at the same time have given us a "short cut" to tinct. camph. co.?

Contrast the B.P. formula with the subjoined one, which I venture to think might replace it with advantage, as the medicinal properties of the tincture are thoroughly maintained:—

B.P. Formula.

Opium, in powder	..	..	..	..	40 grains
Benzoic acid	..	..	..	..	40 "
Camphor	..	..	..	..	30 "
Oil of anise	..	..	..	..	½ fl. drachm
Proof spirit	..	..	..	..	1 pint

Macerate for seven days in a closed vessel, with occasional agitation then filter, and add sufficient proof spirit to make 1 pint.

Suggested Formula.

Tincture of opium	..	..	..	9 fl. drachms 45 minims
Benzoic acid	..	..	..	40 grains
Spirit of camphor	..	..	..	5 fl. drachms
Essence of anise	..	..	..	2½ "
Proof spirit	..	..	..	to make 1 pint

Mix the spirit of camphor and the essence of anise, in this dissolve the benzoic acid, add the tincture of opium, and sufficient proof spirit to make 1 pint.

Faithfully yours,
Oban, January 12. SAMUEL LAWRENCE.

Proprietary Medicines and Chemists.

We are asked to publish the following correspondence, which is a continuation of some which appeared in this journal last month.

J. Freeland, Esq., Bathgate.

SIR,—Your valued favour of December 2 came duly to hand. Kindly pardon my tardy reply.

Your letter sets forth the following counts, viz.:—

(a) That no respectable druggist does substitute another when Fellows' hypophosphites is asked for.

Ans.—I am certain of this. The multitude of respectable chemists do not imitate or try to substitute; the unscrupulous, however, do not hesitate to do so, and my circular is intended for this latter class.

(b) That the circular is prompted by selfish ends.

Ans.—If it is selfish to protect one's property, you are right. My endeavour is to prevent injury and injustice to the patient, by facilitating his recovery; to the doctor, by

guarding him against deception and disappointment; to the respectable chemist, by warning him against cheap substitutes, and by teaching the unscrupulous to mend their ways; and to myself, by soliciting aid from every honest professional man.

(c) That I ignore the interest of the chemist.

Ans.—This is contrary to my wish, and contrary to my record. Having been a hardworking chemist over twenty-five years (viz., from 1847 to 1873), I appreciate the hardships, the long hours, the responsibility, and the meagre earnings of the average toiler, and no one can sympathise more with his hardships than I do, and no one will, according to his means, prove this more readily when called upon.

(d) That because "the skill and time of the chemist" is his stock in trade, and because grocers interfere therewith by underselling, the "character and reputation" of a third party should suffer and be used as common property.

Ans.—This doctrine will, I think, scarcely bear scrutiny. You teach retaliation against a friend because your enemy injures you. Two wrongs never make a right! It is a species of sharp practice which will end in discovery, and then meet its appropriate punishment, viz., loss of business patronage. Fellows' hypophosphites is sold by all wholesale druggists to all comers, and we have no control over the sale when once it leaves our hands. Like other free selling commodities the price of which is known, it is made a leading article by the "stores" and other miscellaneous dealers, and offered at small profit in order to induce a belief in the public mind that all their wares are equally cheap, and so effect profitable sales. This evil we are powerless to overcome. Chemists can only preserve their business by doing likewise, and thus retain their clients for other and larger purchases.

The time spent in apprenticeship, the money for education, the stiff examination, &c., can never excuse injustice in building up a trade on another man's superstructure. No one can object to a chemist inventing and building up a name for himself; but it is a communistic and dishonest idea to seek gain by appropriating the property of another, and, though frequently done by the thoughtless and avaricious, is unworthy of the profession.

I am, sir, yours very truly,

London, December 19. JAMES I. FELLOWS.

To the above Mr. Freeland has sent the subjoined reply:—

SIR,—I beg to acknowledge the receipt of your favour of December 19. If you will read my letter over again you will find nothing in it to justify you in saying as you do, that I teach the doctrine "that because the skill and time of the chemist is his stock-in-trade, and because grocers interfere therewith by underselling, the character and reputation of a third party should suffer and be used as common property."

The first sentence of my letter, the truth of which you admit, disproves any such intention. I deny also your statement that I teach retaliation against a friend because my enemy injures me. I do not look upon a cutting grocer as my enemy, though he undersells me; but I cannot recognise as my friend one who, while making great professions of friendship, places me or the trade at a disadvantage.

Your statement that "Fellows' hypophosphites is sold by all wholesale druggists to all comers—we have no control over the sale when once it leaves our hands," may be so far true; but allow me to say that I think it is a little disingenuous and misleading. I am living at a considerable distance from 7 Snow Hill, London, E.C., but I think I may safely assert that the stores and the other miscellaneous dealers to whom you refer do not buy from the wholesale druggists, but purchase in the same market as the wholesale druggists. Your advice to the poor chemists that they can only preserve their business by doing likewise, that is to say, sell other people's wares at and under cost price, appears to me (pardon me for saying so) to come with a very bad grace from one who appreciates "the hardships, the long hours, the responsibility, and the meagre earnings of the average toiler."

If he is to do so, and sell "Fellows' hypophosphites" without a profit, he must of necessity do the same with every

other patent and proprietary article he deals in. Not to speak of the hard and thankless task of toiling solely for the benefit of the proprietor, pray how is the poor toiler to live? I quite admit the truth of your statement "that the time spent in apprenticeship, the money for education, the stiff examination, &c.," can never excuse injustice in building up a trade on another man's superstructure. I never said so; but I do say that the training a chemist is now compelled to undergo, and the responsibility he is under, ought to place him in a higher and nobler position than that of a mere huckster of secret preparations; and, if chemists are true to themselves, they will encourage less in future the host of patent and proprietary articles whose introduction into public favour they have (to their own disadvantage) largely promoted, and stick to their legitimate business—that of preparing, dispensing, and selling their own medicines.

I am, yours sincerely,

Bathgate, December 30.

JOHN FREELAND.

To this Mr. Fellows replies as under:—

J. Freeland, Esq., Bathgate.

SIR,—Yours of December 31 has been duly received. My reply to your first letter referred more to the meaning and spirit than to your actual language.

To my mind, its purport is substantially the statement of a grievance and the suggestion of a remedy. The grievance is that Fellows' hypophosphites is sold by grocers below advertised prices, and you clearly intimate that our house is blameable for this, and also name the remedy, i.e., that chemists should discontinue its sale and vend a substitute.

If this is not the clear interpretation, why take exception to the remark in my circular as to the "character and reputation of Fellows' hypophosphites being a valuable portion of my stock-in-trade"? Why speak of "spurning to act longer as a mere huckster of secret preparations," and excusing the chemist who "prefers now to push into sale preparations of his own"? If you do not recommend substitution, you assuredly condone the act, or I do not grasp your meaning or the motive for the letter.

Underselling cannot be more obnoxious to you than to ourselves, and has been a serious and difficult question which we have been powerless to solve; and we would gladly adopt any feasible plan by which to abolish it. So far as I can ascertain, we only sell to those engaged in our legitimate business. Other houses must purchase after the goods leave our jurisdiction.

In making the suggestion not to be undersold in leading articles, I simply described a policy adopted by myself with success when in business, and in this way retained customers for profitable sales who would otherwise have been lost to me. This, however, is simply my idea.

Hoping my remarks will be accepted in the same spirit as they are penned, viz., the warmest good feeling,

I am, sir, yours very truly,

67 Holborn Viaduct, January 4. JAMES I. FELLOWS.

P.S. As I leave England on the 7th inst., on a long voyage, our correspondence must necessarily close with this letter. I sincerely hope, however, you will upon reflection see how untenable are your ideas upon this subject of imitation and substitution.

94/596. *Simple Simon* wishes to know how naphtha may be driven off from **Methylated Spirit**. If it were possible—which it is not—it would not be legal, and we advise "Simple Simon" not to try. In some chemical laboratories the methylated spirit (used for educational purposes only) is digested with quick-lime and purified animal charcoal; then distilled. The malodorous compounds are thus diminished, but the spirit still contains methyl.

74/47. *R. Madgshon*.—**Theatrical Varnish**, for fixing moustachios, is, we believe, a solution of common resin and castor oil in spirit. Try the following formula:—

Resin	..	..	..	..	..	..	1 oz.
Castor oil	..	..	..	..	..	..	1 drachm
Methylated spirit	..	..	..	..	..	..	4 oz.

Shake occasionally until dissolved, then strain and perfume. The oil is added to facilitate removal of the false adornments.

23/95. *C. W. P.* (Trinidad).—Balsam Tranquillans (Fr. Codex).

Fresh leaves of belladonna, henbane, nightshade, tobacco, poppies, and stramonium, of each, 200 grammes; essential oils of wormwood, hyssop, wild marjoram, peppermint, rue, rosemary, sage, and thyme, of each, 50 centigrammes; olive oil, 5,000 grammes. Bruise the plants, and digest them in a copper basin with the oil; warm gently until the water in the plants has been entirely evaporated. Continue the heat until the oil acquires a fine green colour: press, decant, add the essential oils, and filter.

41/180. *E. W.*—Bronzing Gun-barrels.—No doubt there are tricks of manipulation which can only be acquired by practical experience, but perhaps the subjoined information may help you. First, try the form given in the *C. & D. Diary*, 1884 (page 139). We are told good results can be obtained therefrom. The following, we learn, is the method employed at the Enfield Small-arms Factory. The barrels and bodies are first scalded in a solution of soda for twenty minutes, and then washed in clean water. Then the following browning-mixture is applied:—

Spirits of wine	5 oz.
Spirits of nitre	8 "
Tincture of steel	8 "
Nitric acid	4 "
Sulphuric acid	3 "
Blue vitriol	4 "
Water	1 gallon

The guns are then placed in a damp heat for about 1½ hour, when they are scalded again, and when cool the rust is scratched off. This process is repeated four times, and then the barrels are cleaned and oiled. The whole operation occupies about eight hours.

7/88. *H. D.*—Composition Powder.—(Dr. Coffin's formula).—Bayberry bark, 4 oz.; Canadian pine (*Pinus Canadensis*), 2 oz.; ginger, 2 oz.; cayenne, 2 drachms; cloves, 2 drachms.

Composition Essence.—The essence which sometimes accompanies the above powder, and which is known also as "Indian Brandee," is composed of 8 oz. each of spirits of nitre and compound tincture of rhubarb and 2 oz. of simple syrup.

35/88. *Petroleum* asks if the Chesebrough Manufacturing Company allow their preparation "Vaseline," when purchased in bulk, to be put up by retailers and labelled "Pure Vaseline"? The Chesebrough Company would seem to be the proper persons to address that query to, but we may remark that, whatever they allow, we fail to see under what law they can prevent such a proceeding.

18/89. *Cambs.*—The Midland Chemists' Association (Birmingham), and those of Liverpool, Manchester, Glasgow, and other places, issue price-lists, which are sold generally at 1s. Mr. Silverlock publishes the Liverpool list; that of Birmingham can be obtained, we expect, from the honorary secretary, Mr. C. Thompson, 79 Stratford Road, Sparkbrook, Birmingham.

30/91. *Holloway's Pills*.—*W. G.* writes:—"I should feel obliged if you would give me the recipes of any or all the following: Holloway's pills, Beecham's pills, Whelpton's pills." Several guesses at the formula for Holloway's pills have been made, but we cannot tell how near either of them is to the original. According to Hager a thousand pills contain—

	Grammes		Grammes
Aloes	40	Ginger	20
Rhubarb	20	Saffron	2½
Cinnamon	5	Glauber salts	5
Cardamom	5	Sulphate potash	10

Made into a mass with confection of roses.

Cooley gives aloes, 4 parts; jalap, 2; ginger, 2; myrrh, 2: made into a mass with mucilage, and divided into 2-grain pills.

Dorvault offers the following formula:—

	Grammes
Socotrine aloes	4
Rhubarb	170
Pepper	45
Saffron	20
Sodic sulph.	20

Make 144 pills.

We have never met with formulæ for Beecham's or Whelpton's pills.

The *C. & D. Nitrometer* for Assaying Spt. *Ætheris Nitrosi*.

Mr. A. Shand, Dunfermline, writes:—"I have much pleasure in sending you the results of my estimations of ethyl nitrite in sweet spt. of nitre by the apparatus described in the *Diary* for 1886. First, to test the accuracy of my apparatus (as I had to measure the ungraduated bit myself) I dried some KNO_3 over sulphuric acid for twenty hours. I then took 1 gramme and estimated the amount of NO in it. The gas measured, after correction for temperature and pressure only, 16.34 c.c., the calculated amount being, suppose the KNO_3 to be perfectly pure and dry, 17.01 c.c. I then procured some sp. æth. nit. from three different places, and estimated the $\text{C}_2\text{H}_5\text{NO}_2$ by KI and H_2SO_4 . The amount of gas liberated from 5 c.c. of the first sample was 20.9 c.c. at 0° and 760 mm., equal to 1.4 per cent. of $\text{C}_2\text{H}_5\text{NO}_2$. In the next sample the amount of nitric oxide liberated from 5 c.c. measured 21.9 c.c., 0° and 760 mm., equal to 1.47 per cent. of ethyl nitrite. In the above sample 19.9 c.c. of the gas was liberated before any H_2SO_4 was added. This third sample gave pretty nearly the same percentage, 1.3 being the amount. A second, and with some of the samples, a third, or even fourth estimation gave almost the same figures."

168/14. *Nimrod*.—Tartaric acid substitute is acid sulphate of potash, sold by grocers as "tartaraline."

89/24. *A. E. T.*—Aqua anethi conc., 1 to 40.—

Oil of dill	100 minims
Light carbonate of magnesia	2 drachms
Rectified spirit	3 oz.
Water	1 "

Dissolve the oil in ½ oz. of spirit and as much water, and rub up with the magnesia, then transfer to a bottle with other 2 oz. of spirit, and shake occasionally during three hours, filter, and wash the magnesia with the remainder of the spirit and water, or a sufficiency to make 4 oz.

One ounce of this solution to be added to 39 oz. of water to make aqua anethi.

Mr. J. J. Brown, chemist, Glasgow, favours us with a note entitled "The Problem of Existence Solved." It appears that some correspondents of a Glasgow paper have been troubling themselves about said problem, and Mr. Brown has disposed of their difficulties. His disquisition is, however, much too metaphysical for our pages.

The Income-tax.

SIR,—Can you inform me if there is any way of appeal from the dictum of the Local Income Tax Commissioners, or in my case I should say Commissioner, as one only at the suggestion of the surveyor of taxes refused to hear me, on the ground that my account was insufficient. I gave average return for three years, estimated profit, and then the usual deductions, two-thirds rent, trade expenses, &c. I should think mine is only one case in thousands in our business where stocktaking is almost unknown, and probably many are in the same difficulty as I am; therefore, if you could give a little information on the subject I think the space would not be wasted.

Yours truly,

AN OLD SUBSCRIBER.

You have no remedy except this:—To pay the amount claimed, and to keep during this year an exact account of your profits. If you do not realise the amount at which you

are assessed, you can apply "under the 133rd section" for repayment of the overcharge. But you will have no chance unless you can give exact details, and you cannot give exact details without taking stock. There is no appeal from the decision of the Commissioners.

15/183. *J. D.*—No pocket edition of the Pharmacopœia has been published, nor is there any probability of any such appearing.

F. A. G., Newburgh, N.Y.—Salicylic acid is universally used for the purposes you name.

89/1. *Lemonade*.—**Soluble Essences**.—The following is a simple method which answers the purpose:—Oil of lemon, 1 oz.; light carbonate of magnesia, 1 oz.; rectified spirit, 15 oz. Rub the oil and magnesia together in a mortar, add the spirit gradually, transfer to a bottle and macerate for two days, then filter. This does not give a quite clear syrup, but the lemonade made from it is clear, and that, we expect, is what you want. Have you tried tincture of the fresh peel? It makes a perfectly bright syrup of fine flavour.

91/36. *N. S.*—**Bromide of Potassium Eruption**.—Nearly the whole of our supply of bromine comes from South America. The medical man's statement that your bromide is impure, and caused the eruption because it is so and "American," is absurd. The eruption is one of the symptoms of bromism, regarding which we quote from Dr. Sydney Ringer:—"A frequent result of the prolonged administration of the bromide is an eruption, generally acneiform, occurring most on the face and back, but it may affect even a larger surface. . . . The acneiform spots may become true boils, and these boils sometimes form large ulcers with conical scabs, looking like rupia. . . . Professor Dühring, in addition to acneiform pustules, enumerates brownish discoloration of the skin, simple papular eruption, confluent or molluscoid acne"—but we have quoted enough, and sufficient to satisfy your customer.

91/51. *J. Calvert*.—**Finishers' Dip**.—We suppose this to be Ean de Javille, for which take of chlorinated lime, 2 oz.; carbonate of potash (or soda), 4 oz.; water, 2 pints. Shake up the lime with $1\frac{1}{2}$ pint of water, and the soda in $\frac{1}{2}$ pint, mix, and after an hour filter.

30/185. *Ignoramus*.—**Cod-liver Oil Emulsion**.—In the formula generally followed tragacanth is the emulsifying agent, and, though the product is thick, it is, on the whole, the most satisfactory. Take 1 oz. of the finest tragacanth in powder, and mix it in a mortar with 3 oz. of glycerine, and add, stirring constantly, 17 oz. of boiling water. With this jelly mix 20 oz. of cod-liver oil, previously flavoured (with oil of bitter almonds and vanilla, or cinnamon and chloroform). Add the oil to the jelly $\frac{1}{2}$ oz. at a time, taking care that each portion is thoroughly incorporated before adding another, otherwise the process must be begun *de novo*. The whole operation must be done in a large mortar.

In the cream-like emulsions quillaia and an alkali are the emulsifying agents, but some makers add pancreatine and other substances of that nature. Take 19 oz. of lime water, 1 oz. of tincture of quillaia (1 in 5), and 20 oz. of cod-liver oil, and shake well together in a Winchester. Flavour as above. By experiment with this as a basis you will be able to get a satisfactory result; as much as 75 per cent. of oil may be emulsified by means of quillaia.

Advertising a Patent Medicine.

To the Chemist and Druggist—

SIR,—Will you kindly inform me through the journal of the best advertising agents for introducing a patent medicine where your means are limited? Are there any books published on the subject of advertising? N. Y. Z. (54/93.)

We must decline to recommend an "advertising agent." The gentlemen in that profession are not afflicted with

modesty, and we do not know that there is much to choose between them. Many of them publish books on advertising, but the object is mainly to trumpet themselves. We know of none which would be of any real use to you. There is no royal road to success in working a patent medicine. No man living can say that such a preparation will take, and that such another will not take. Merit seems to be hardly a factor in the calculation. The title may have some importance, but it is difficult to say what, as some of the best-named articles fail, and some clumsily-named ones succeed. Literary skill in the advertisements is also a very doubtful advantage. The million understand and prefer a plain statement to all the involutions of poets or rhetoricians. When one looks at the splendid successes which some medicines have achieved, and apparently with such a paltry expenditure of ability, imitation is very tempting. But thousands of people have had that fancy, and not more than one in a hundred has realised his dream. With a clear perception of the risk, go into it by all means. But take our advice, and control your advertising yourself, even if you see fit to employ an agent. Let him do your work, but do not let him decide anything. He works on an entirely wrong principle; that is, he lives on the commissions which many papers pay him, and it is obvious that the most worthless papers will pay the highest commissions.

92.7. **Ticket-writing Inks**.—Black: A special ink is made for ticket-writing. Japan ink, which may be procured through a stationer, is also used. But you can make a good substitute with any ordinary good black writing-ink, thickening it with acacia.

Coloured inks are made with—for blue, ultramarine blue; and for red, vermilion, with thin mucilage as a medium. The mucilage should contain 2 or 3 per cent. of glycerine to prevent cracking.

The Patent Medicine Stamp.

G. B., 30 185, writes:—"I hope you will do all you can to get an alteration in the price of the stamp duties on medicines. That is an excellent idea of your correspondent to have a $\frac{1}{2}$ d. stamp for a 6d. article, 1d. for a 1s., and $1\frac{1}{2}$ d. for a 1s. 6d. article, and same rates as now for articles of higher prices.

Casks v. Hampers.

To the Chemist and Druggist—

SIR,—In the large towns I should think empty casks or barrels the cheapest packages that could be bought—i.e., emptied of flour, soda, fruit, &c. Is it generally known that if such packages were used instead of hampers, very much less carriage would be charged by the railway companies, whether containing drugs, patent medicines, or sundries? and I should imagine it would also be a great saving to the wholesale houses, as the wear and tear of hampers must be a heavy item.

Yours truly,

A COUNTRY CHEMIST. (191/4.)

56 93. *Almond*.—The reference was to the first presidential address of Professor Attfield to the Pharmaceutical Conference at Southampton. You will find it in THE CHEMIST AND DRUGGIST, September, 1882.

93/22. *Student* (Portsmouth) submits the following queries—

(1) We get our Fluid Magnesia in Corbyn quarts, and before we get one finished there is generally a deposit of about an inch in depth at the bottom of the bottle. How can this be re-dissolved?

The deposit is carbonate of magnesia, thrown out owing to loss of carbonic acid gas. It is not practicable to re-dissolve it with the gas, because the carbonate is best acted on when freshly precipitated from the sulphate, and in this case resolution would not pay. Better store it in smaller bottles.

(2) Will you please state briefly the nature of, and best remedy for, Ringworm?

"A disease of the hair-follicles and hair, of a circular

figure, and spreading in the form of a ring." Supposed to be caused by a parasitic fungus. *Treatment*.—Paint round the circumference with a solution of nitrate of silver, 1 in 8, and, after a day, dress with chrysarobin ointment.

(3) A few months ago, in one of the interesting and instructive papers by a successful minor candidate, he stated he had been given a prescription to dispense containing 1 minim of Creasote with a little Rhubarb in pills. The examiner asked if he dropped the creasote. What else could a dispenser do?

Weigh it, allowing a grain for each minim. The best way is to drop it on the rhubarb in the scale-pan.

(4) I was not aware of the wrinkle about pulv. rhei and a steel knife. What is the cause of the deepened colour? The rhubarb tannin forming a dark-coloured iron salt.

50/95. *Midlands* ask:—Can anyone recommend a good useful *still* for pharmaceutical purposes?

11 162. *F. C. K.* asks for a formula for "Solution of Magnetic Phosphate of Iron similar to Lightfoot's."

43/92. *Pharmacy*.—The *Title Pharmacy*.—Clause 12 of the Pharmacy Act, 1852, makes it penal for any person other than a pharmaceutical chemist in Great Britain to "use, assume, or exhibit any name, title, or sign implying that he is a person registered under this Act." The question for a court would be whether the public description of a shop as a "pharmacy" was such an implication. A good many years ago, we believe, the Pharmaceutical Council put forward a claim that it was, but, being resisted, they did not press it, and we do not think they could now enforce it.

55/92. *J. G.* Injection Brou.—The following is given as the formula:—

	Parts
Water	180
Sulphate of zinc	1
Acetate of lead	2
Tincture of catechu	4
Syrup of saffron	4

82/34. *A. K.*—Capping Glue.—You seem to use too much water. In the formula given in our 1884 Diary the following are the proportions:—Glue, 112; glycerine, 10; and water, 60. Thinness you get by heating, and the more glue the more brittle is the capping. The omission of glycerine also hardens the capping, but the glycerine should not be omitted. Try another variety of glue.

82/51. *Dispensing Difficulty*.—A correspondent has tried "every imaginable way with the following prescription, but invariably gets an iodine-like precipitate after standing a quarter of an hour." The prescription is:—

Quinine disulph.	.. .. .	gr. xij.
Potassii iodidi	.. .. .	gr. xxxvj.
Acid sulph. dil.	.. .. .	ʒi.
Syr. aurantii	.. .. .	ʒvj.
Aquam, ad	.. .. .	ʒxij.

M. ft. mist.

Previously the mixture had been dispensed clear. We cannot get anything else than a clear mixture, which darkens in the course of a few days, but does not throw down the iodine-like precipitate which our correspondent refers to, and which we suspect is a superiodide of quinine. We dissolve the quinine in 8 oz. of water and the dilute acid, add the syrup to this, then dissolve the iodide in 2 oz. of water, add it to the other solution, and make up to 12 oz. The mixture is as clear as water. Our correspondent's sulphuric acid may contain nitrous constituents, the presence of which gives the precipitate he refers to, because a little iodine is freed thereby. Then if the iodide is weighed on the same scale-pan as the quinine, the adhering quinine colours the iodide solution yellow from the first. We have noticed the precipitate referred to in a similar mixture containing also spirit of nitrous ether; the precipitate is a mixture of iodide of quinine and iodine, loosely combined.

Suggestions.

COCAINE SOOTHING-SYRUP, for application to children's gums during teething, is recommended by the *Deutsch Med. Zeitung*, in the proportion of 1 to 100 of syrup, coloured with a few drops of tincture of saffron.

TO EXTRACT INK FROM MAHOGANY.—Apply diluted sulphuric acid to the ink spot with a feather: let it lie for a few minutes, and rub it off quickly, and repeat if not quite removed.

REMOVING STAINS.—A correspondent of the *Brit. Med. Journ.* says stains of Condy's Fluid, and also of many fruits, can be removed from linen by immersion for a short time in urine.

TO REMOVE FOREIGN SUBSTANCES FROM THE EYE.—An American contemporary recommends the placing of 1 or 2 grains of linseed between the lids. The slime dissolving catches the foreign substance, which may then easily be washed out.

TEST TO DISTINGUISH STEEL FROM IRON.—A German paper has the following:—"Pour on the object to be tested a drop of nitric acid of 1·2 sp. gr., let it act for one minute, then rinse with water. On iron the acid will cause a whitish grey, on steel a black, stain."

IODIDE OF POTASSIUM IN MINERAL-WATER FORMS.—Dr. v. Hösaslin proposes, in a German medical journal, to correct the taste of iodide of potassium by dissolving it in carbonated water. He finds that by this means the nauseous taste of the iodide is almost entirely neutralised.

NICKEL CRUCIBLES have lately been adopted in some chemical laboratories, in the place of the silver ones generally used for melting caustic alkalies. They have the advantage, not only of being cheaper, but of being capable of resisting a higher temperature than the latter, and the result is said to be favourable.

TO TAKE OIL AND GREASE OUT OF BOARDS, MARBLE &c.—Make a paste with fuller's earth and hot water; cover the spots with the paste, let it dry on, and the next day scour it off with soft or yellow soap. Or, make a paste with soft soap, fuller's earth, and a little pearl-ash, and use as above.

M. GELLETTE overcomes the odour of iodoform by mixing it with charcoal and sulphate of quinine in the following proportions:—

	Grammes
Iodoform	100
Sulphate of quinine	1
Charcoal	3

TO ALLAY IRRITATION.—Professor Bartholow says that itching of the skin, from any cause, can be allayed by sponging the patient with—

Acid. carbol.	.. .. .	2 drachms.
Glycerini	.. .. .	1 oz.
Aque rosæ, ad	.. .. .	8 "

TOUGHENING PAPER.—A plan for rendering paper as tough as wood or leather has been recently introduced on the Continent: it consists in mixing chloride of zinc with the pulp in the course of manufacture. It has been found that the greater the degree of concentration of the zinc solution, the greater will be the toughness of the paper. It can be used for making boxes, combs, for roofing, and even for making boots.—*Journ. Soc. Arts.*

COCAINE FOR NEURALGIA.—Dr. de Coninck, of Ghent, states in the *Scalpel* that an application of a 1-per-cent. solution of hydrochlorate of cocaine by a camel's-hair brush or a dropper to the bottom of the external auditory canal (in the ear) arrests the pain of neuralgia of the facial nerve, and, indeed, any pain in the temporal region, instantaneously. He has not found this treatment of the same value in neuralgia of the fifth nerve, but suggests that perhaps some other point of application may exist for this nerve. Dr. de Coninck has employed this method of treatment for a month—he does not say on how many cases—and has "never failed to obtain the most marvellous success." If the neuralgia returns, the application can be repeated.

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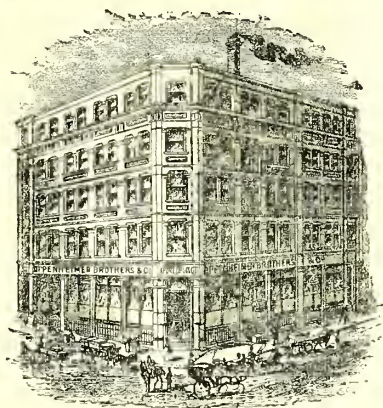
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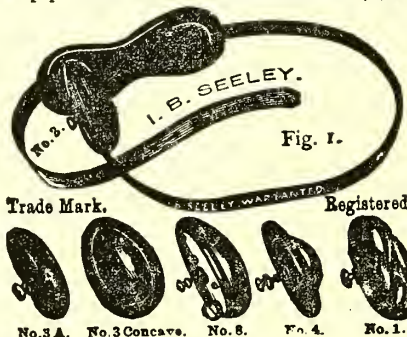
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Having long established superior quality of material the first consideration, all the different parts in the construction of my specialities will be found of unequalled excellence, while the practical experience for a quarter of a century devoted to the extensive Retail Department of my establishment has afforded special advantages in the proper construction of Trusses to best meet the requirements; hence the efforts to imitate my Patterns, adopt long-recognised Trade-marks and Copyrights with claims of "just as good as Seeley's" so often made.

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PRIOR, 2s.; two bottles, 4s.; four bottles, 8s. For 4 oz. (16 bottles) and upward
6s. per ounce.

LYNCH & CO., 192 Aldersgate St., LONDON

INDEX TO ADVERTISEMENTS,

See pp. 41—44.

B. G. LENNON & CO.

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9..Anbergier's Syrup27/	4/6.. " Mathey Caylus	..28/	11/.. " Pills90/	4/0..Racahout26/6
9.. " Pâte18/	4/6..Obassang's Wine38/8	2/3..Papier Fayard18/6	4/6..Reynal's Bougies42/
6..Bay Rum84/	2/9.. " Pills24/6	1/11/ " Ditto7/	2/9..Ricord's Injection24/
6..Ditto27/	4/6..Olin's Bromide Cam.Dragées	45/	4/..Papier Fruneau27/	4/6.. " Capsules28/
0..Belloc's Charcoal14/	6/0..Eau Botot38/	2/8.. " Ditto15/	8/0.. " Syrup	..72/; 2/9; 28/
9.. " Lozenges13/	3/0.. " Ditto24/	1/9..Pâte Anbergier14/6	1/6..Star Paper12/
6..Blancard's Pills30/	2/6..Espic's Cigarettes14/	2/0.. " de Berthé16/	2/9..Vallet's Pills32/
6..Ditto18/	5/6..Elixir de Coca48/	2/9.. " de Coca23/	1/9.. " Ditto14/
6..Brou's Injection27/	2/9..Flon's Syrup23/	1/9.. " de Georgé13/	4/6..Veloutine (White,Pink,Yel.)	85/
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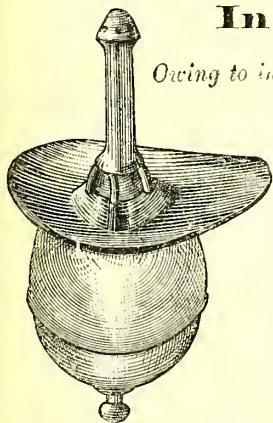
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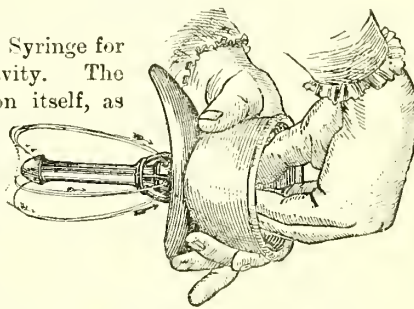
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In Black Walnut Case, Satin Lined.

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can therefore be kept in circulation and in contact with the parts by repeating the pumping motion of the bulb. It will also be noticed that the fluid escapes as a spray from the large holes at the point of the stem and returns through the holes at the root of same, which is provided with hard rubber screen-bars, preventing the folds from interfering with the rapid return of the fluid into the bulb. In filling the bulb, a couple of turns will unscrew it.

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IN TRANSPARENT GLASSY SCALES.

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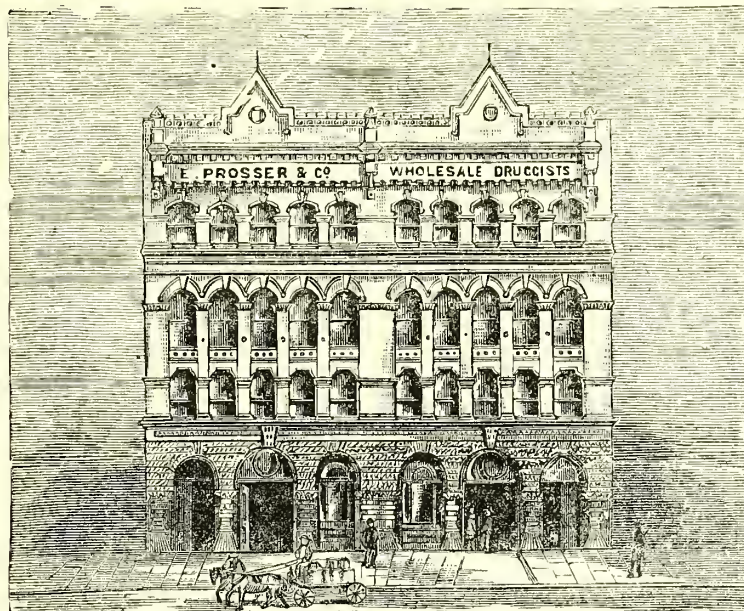
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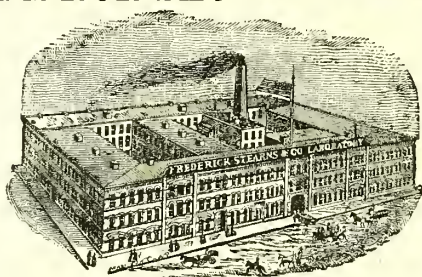
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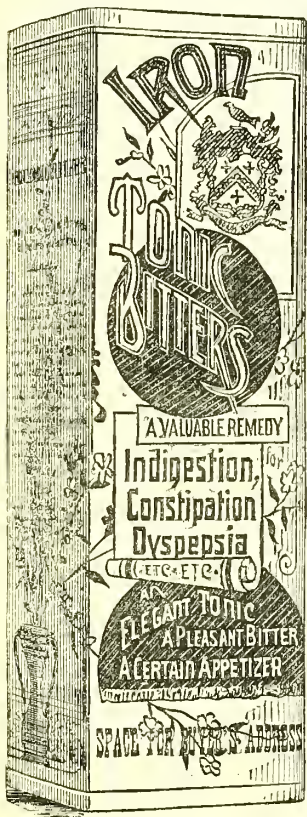
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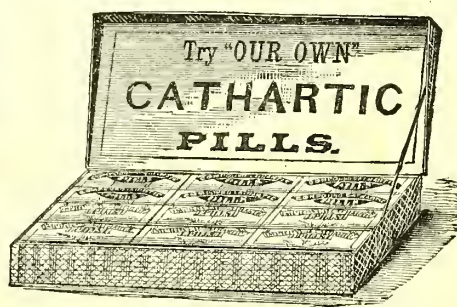
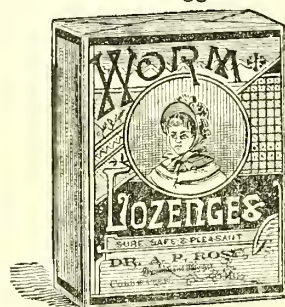


sell them on a close margin of profit as manufacturers; to use good glass, velvet corks, excellent printing, elegant engraved and tinted wrappers; to adapt the styles, sizes and prices to meet the popular wants; to furnish the retail druggist (who has few appliances himself) a means to drive patent medicines out of his sales; to enable him to make the profits himself which otherwise go into the pockets of patent medicine manufacturers; to replace quack and secret nostrums by medicines of known composition and value.

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Illustrated Descriptive Price List of the Popular Non-Secret Medicines, Toilet and Domestic Articles, is now out. It contains 96 Pages and 196 Engravings. Is Furnished to Retail Druggists FREE.

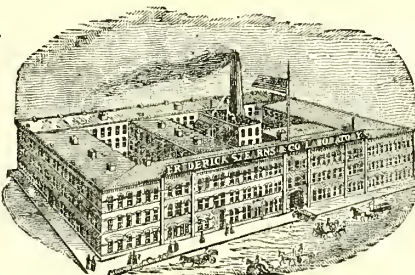


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FLUID EXTRACTS.....	582
PILLS (Sugar-Coated), Porous, Soluble....	635
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ELIXIRS (Medicated) of fine flavor.....	193
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RESINOIDS—Concentrations.....	220
OINTMENTS—With Saxoline basis.....	137



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EFFERVESCENT GRANULES.....	62
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SUPPOSITORIES.....	422
MEDICATED SYRUPS.....	312
MEDICATED TINCTURES.....	471
MISCELLANEOUS.....	Over 1000

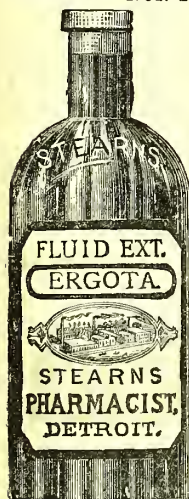
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ADVANTAGES GAINED.—No heat is employed; the volatile essences are retained unaltered. A solvent of unvarying specific gravity is used throughout the process. The finished and saturated product more naturally represents the drug—tested by appearance, taste and odor—than do the ordinary fluid extracts.

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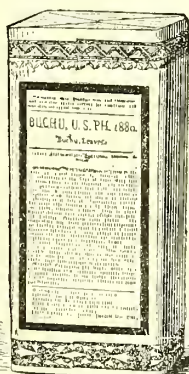
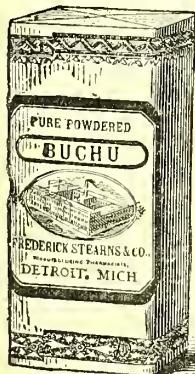
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STYLE.—These ointments are put up in airtight (new style) glass jar, price including jar. It forms an elegant shop shelf jar, and when empty may be used for other purposes.

Saxoline itself, plain carbolated, camphorated, thymolated, arnicated, etc., is furnished in pound tins, in five, ten and twenty-five pound tins, in one, two and four-ounce vials, at remarkably low prices. Warranted equal in every respect to the high-priced proprietary articles. May be had at any melting point from 105° F. (usual) to 120° F.



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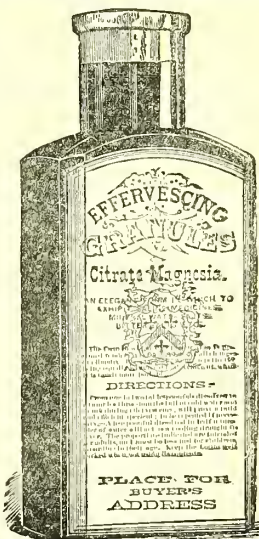
PURITY.—We warrant our powdered drugs to be of good quality, to be powdered with care by steam power, in machinery of improved design and to be sent to our customers free of adulteration.

How PACKED.—Our powders are put up in pounds—elegant-shaped shelf canisters; air tight, covered with handsome tinted wrapper, with label in gold, white and black, similar to a shop furniture label, with also a back label in crimson, white and black, upon which is given the description, properties, dose and uses of the drug with formula. These goods may also be had in five-pound tin cans, in ten-pound tin cans, and in bulk in paper or wood, under our guarantee label.

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A form well adapted to the exhibition of saline aperients, mineral water or bitter salines of alkaline or metallic salts found in mineral springs, and of remedies which are aided by the sedative action of carbonic acid or the refrigerant properties of vegetable acids.

Put up in two sizes, bottles that hold six and three fluidounces, cobalt blue flint, metal caps, each half dozen or one dozen in cartons. All of these may be had in bulk in one-pound to ten-pound canisters, and if in larger lots special quotations will be made.



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It is issued postpaid to customers regularly; but as often as four times a year a copy is mailed to every druggist in fair rating in the United States, West Indies, Central and South America, Mexico, Africa and Polynesia.

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They are not made from the crude material, but by dissolving the active principles in Alcohol in definite proportions, and invariably represent a uniform amount of therapeutic power.

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In Bulk or in Bottles at Lowest Rates.

SPECIALTIES:

Spirituuous Preparations, Ethers, Alcohols,
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Dutch Medicines for the Cape Colony.

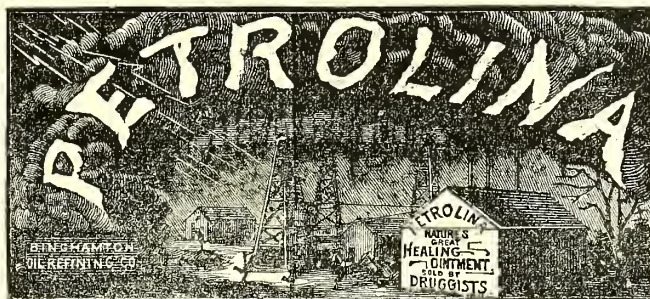
Pure Gingerine, Pure Capsicine, made with
the Purest Spirit in Bond.

Tobacco Extract, Pure Kentucky, for Sheep
Dipping.

Export Orders taken ONLY through European
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PARRAFINUM MOLLE, B.P.

KEEPS SWEET
IN ANY
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NEVER
BECOMES
RANCID.

Manufactured only by the Binghamton Oil Refining Co. of Binghamton, New York, U.S.A.

A GENUINE PETROLEUM JELLY, OR PETROLATUM OF GUARANTEED PURITY.

HIGHEST MELTING POINT OF ANY, 120° FAHR. LOWEST IN PRICE.

Since the adoption of petroleum jelly by the British Pharmacopœia as an official preparation it behoves the Chemist to see that the article he uses

EMBODIES ALL THE REQUIREMENTS OF THE PHARMACOPŒIA.

PETROLINA is manufactured from crude petroleum *only*, WITHOUT THE AID OF ACIDS OR ALKALIES. It is entirely odourless and tasteless, and of handsome colour.

PETROLINA has a firmer consistency than any other petroleum jelly, and is better adapted as a base for ointments.

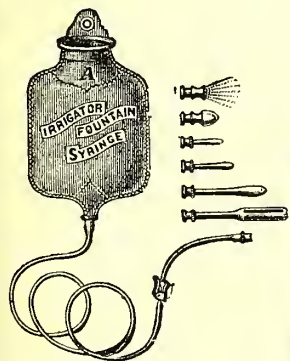
Put up Plain, Perfumed, and Medicated in bottles of 2 oz. or 5 oz., also supplied in casks of 2 to 3 cwt. or in Packages of 50 lbs., 25 lbs., 5 lbs., or 1 lb.

Samples, Quotations, and Formulas for Official Cerates and Ointments compounded with Petrolina free on application.

To be had of all Wholesale Druggists, Drysalters, and Sundriesmen.

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E. A. DE PASS & CO., 3 COLEMAN STREET, LONDON, E.C.
Sole Agents for Great Britain.



MATTSON'S NEW IRRIGATOR
FOUNTAIN SYRINGE, 5/- each.

Highly recommended by prominent physicians.

The attention of all dealers in Surgical Instruments is directed to the large variety of goods in their line manufactured by

THE MATTSON RUBBER CO.

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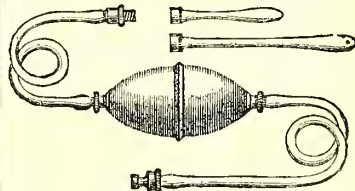
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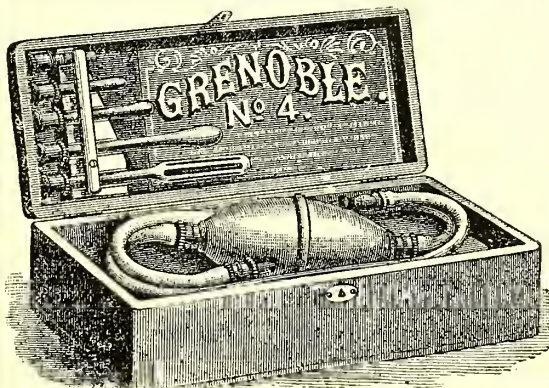
EXCLUSIVE AWARD at the CENTENNIAL EXHIBITION
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SEASIDE SYRINGE.

With Metal Tubes, 15/- per dozen.
With Vulcanite Tubes, 17/6 per dozen.

The cheapest Higginson principle Syringe in the world.



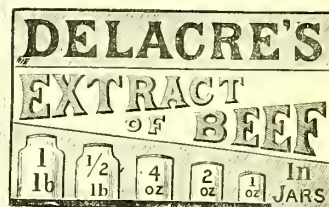
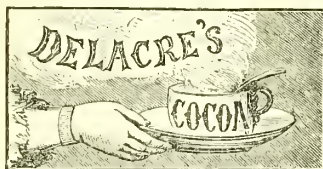
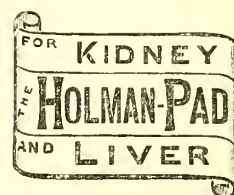
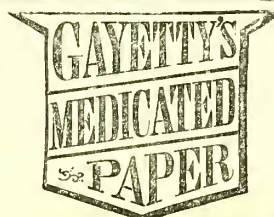
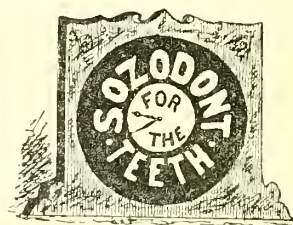
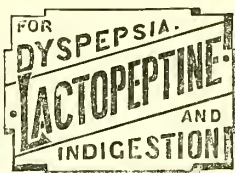
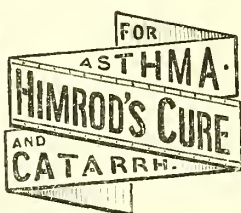
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Full Illustrated Catalogue
and Price List free on
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3 Coleman Street, E.C.,
where samples may be
inspected.

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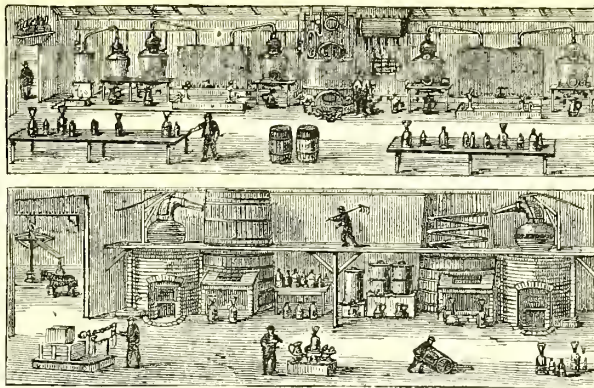
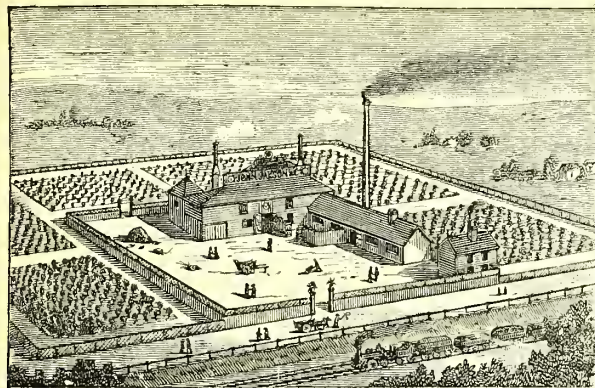
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Show Cards and Printed Matter will be supplied on request.

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MITCHAM

Peppermint, Lavender Oils, etc., Steam Distilleries,
MITCHAM ROAD, NEAR WEST CROYDON, SURREY.

REGISTERED



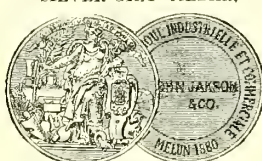
TRADE MARK.

GOLD MEDAL,



PARIS, 1889.

SILVER-GILT MEDAL,



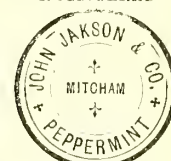
MELUN, 1880.

SILVER MEDAL,



ANTWERP, 1885.

REGISTERED



TRADE MARK.

City Offices:
17 Philpot Lane,
Fenchurch St.,
LONDON, E.C.

JOHN JAKSON & CO.

Agency & Dépôt:
40 Rue de la Verrerie,
PARIS.

Each Bottle must bear the above Trade Mark, under which we send from our Mitcham Distilleries only PURE Peppermint, Lavender, and Camomile Oils. Each Bottle is labelled, specifying that our Oils are guaranteed PURE, and as such are INVOICED.

THE soil and climate of the District of Mitcham (Surrey) are most favourable to the good culture of Peppermint, Lavender, and Camomile, and produce those qualities of Essences so much sought after by Chemists, Druggists, &c., throughout the world.

It is beyond dispute that our Peppermint Oil is the best manufactured, and we defy competition, which accounts for the high prices obtained.

We are the largest Growers and Distillers of Peppermint, Lavender, and Camomile in England, and we spare no expense in obtaining the highest state of cultivation. We distil only the pure plants, the greatest care being taken to avoid weeds or heterogeneous substances.

Our Distilleries are built on the newest and most approved principles; the addition of steam power aiding us to produce the best results obtainable. Our Essences are entirely white, and, being free from resin, they will retain their strength for an indefinite period.

We are particularly anxious that our Trade Mark should not be confused with that of numerous so-called Distillers and others, who import inferior and foreign productions, all of whom represent their oils as from Mitcham.

The low price of American Mint Oils is easily accounted for by the great difference in quality. It is well known that extensive factories have been built there for the extraction of Menthol, which operation greatly diminishes the quality of these Essences.

We protest against all such products offering no guarantee to purchasers.

All Oils bearing our Trade Mark are guaranteed pure and genuine, Mitcham Grown and Distilled. By using our Oils, Chemists, Perfumers, Druggists, and others can rely on the regularity of their preparations, a result hitherto impossible to obtain, and at much less cost.

Besides which, the good Flavour and Strength of our Essences (due to the unquestionably favourable and univalued nature of the Mitcham soil) obtains for them the preference from all Peppermint Lozenge Makers, who have acquired, by the use of them, such good fame in England and throughout the world.

Peppermint Alcohols, Dentifrices, and other liquors prepared with our Mitcham Peppermint Oil obtain great superiority, easily ascertained by a trial.

We cannot too strongly urge purchasers, in their own interest, to buy, in preference to all others, our native and genuine products, as they offer besides every guarantee of purity, strength, flavour, and economy.

Awaiting your esteemed demands,

We are, your obedient Servants,

J. JAKSON & CO.

Orders must be sent to our London Office:—17 PHILPOT LANE, FENCHURCH STREET, E.C.

Our Essences are put up in Bottles of $\frac{1}{4}$, $\frac{1}{2}$, 1, 2, and 5 lbs.

PRICES.

N.B.—The following quotations are only for small quantities. From 6 lbs. and upwards special arrangements can be made at reduced prices.

MITCHAM PEPPERMINT OIL, Non-Rectified.. 40/ per lb.
MITCHAM PEPPERMINT OIL, Rectified 44/ "
MITCHAM PEPPERMINT OIL, Double Rectified 47/ "
MITCHAM WHITE PEPPERMINT OIL,
Double Rectified Extra 58/ "
MITCHAM LAVENDER and CAMOMILE OILS, Extra
Fine (in same quantities as Peppermint), at Market Price.

Our Essences are packed in Boxes of—

12, 24, and 50 $\frac{1}{4}$ or $\frac{1}{2}$ lb. Bottles.

6, 12, 18, and 24 1-lb. "

6, 12, 18, and 20 2 lb. "

2, 4, 6, and 12 5-lb. "

And Delivered Free to all parts of the United Kingdom.

GOLD MEDALS—DUBLIN, 1882; BOSTON, 1883;
LONDON, (INTERNATIONAL EXHIBITION) 1884.

SIR JAMES MURRAY'S PURE FLUID MAGNESIA.

The ORIGINAL Article, as prepared by the Inventor, Sir James Murray, M.D.

For over 60 years in use as an excellent remedy in cases of
ACIDITY, INDIGESTION, HEARTBURN, GRAVEL, AND GOUT.
Sold by all respectable Chemists, in **LARGE-SIZED** Bottles (the 1s. size containing nearly
Double the quantity usually sold at that price), at **1/**, **2/6**, and **3/6** each.

CAUTION.—Observe that the Signature of the Inventor is on every label.

SIR JAMES MURRAY'S FLUID CAMPHOR

Is a valuable remedy in cases of **SLEEPLESSNESS** and **WEAK NERVES**. Bottles, **1/** and **2/** each.

SIR JAMES MURRAY & SON, Chemical Works, Temple Street, Dublin.
BARCLAY & SONS, 95 Farringdon Street, London.

MEDALLAS DE ORO—DUBLIN, 1882; BOSTON, 1883;
LÓNDRES (EXPOSICION INTERNACIONAL), 1884.

MAGNESIA FLÚIDA PURA

DE SIR JAMES MURRAY.

El artículo **ORIGINAL** según lo preparaba el Inventor, Sir James Murray, M.D.,

Se viene usando desde hace mas de 60 años como remedio excelente en los casos de


ACEDIAS, INDIGESTION, CARDIALGÍA, MAL DE PIEDRA Y GOTA.

La venden todos los boticarios respetables en BOTELLAS GRANDES (el tamaño de á 1s. contiene el doble de la cantidad que suele venderse á dicho precio), á 1/, *2/6* y *3/6* cada una.

CUIDADO CON QUE CADA ETIQUETA LLEVE LA FIRMA DEL INVENTOR.

ADVERTENCIA.—Por consecuencia de la estensa venta de imitaciones espúreas de nuestra **MAGNESIA FLÚIDA** en algunos puntos de Sud de América, tenemos el honor de anunciar al público, que en el **JORNAL DO COMMERCIO DE RIO JANEIRO** se está publicando en la actualidad una lista de las casas en donde puede obtenerse en aquel pais nuestra preparacion genuina.

SIR JAMES MURRAY & SON, FÁBRICA QUÍMICA, TEMPLE STREET, DUBLIN
BARCLAY & SONS, 95 FARRINGDON STREET, LÓNDRES.

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Prices Current of Drugs and Chemicals and Druggists' Sundries (Illustrated) supplied on application, enclosing Business Card.

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SAVARS SPECIALITIES,

Every Description of Household Requisites, Toilet Requisites, Medical Requisites, Druggists' Requisites.



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HAWLEY'S COUNTER ADJUNCTS.

A Special List, "COUNTER ADJUNCTS," sent on Application.

EVANS' FLUID EXTRACTS,

Of guaranteed quality and representing the whole medicinal properties of the Drugs.

EVANS' CONCENTRATED LIQUORS,

For the extemporaneous preparation of Syrups.

EVANS' SALINE.

The proportions of the various ingredients are carefully and judiciously calculated, so as to form an efficient aperient and alterative, as well as an agreeable and effervescent draught. ALSO

FOSSILINE (WHITE AND YELLOW)

A Bland, Odourless, and perfectly pure Hydro-Carbon Jelly of our own manufacture. Cheapest and best Hydro-Carbon.

ALSO

"MONTSERRAT"
LIME-FRUIT JUICE AND CORDIALS.

Largest Sale of any similar Beverage in the World.

180,000 Gallons Imported annually. Received Awards wherever Exhibited.

Agents for United States: **WRIGHT & RICH**, New York, Boston, Baltimore, and Chicago.

T. & H. SMITH & CO.,

CHEMICAL MANUFACTURERS,

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MORPHIÆ HYDROCHLOR.

In powder and crystals.

MORPHIÆ ACETAS

MORPHIÆ TARTRAS

Introduced by them and specially prepared
for hypodermic treatment.

CODEIA

APOMORPHIÆ MUR.

PODOPHYLLIN

JALAPINE

SALICINE

CHLOROFORM PURE

CHLOROFORM METH.

Their brand has been for many years known to
the Wholesale Trade as absolutely pure.

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RESINA SCAMMONII, B.P.

GINGERINE

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CAMPHOR MONOBROM.

ALKALOIDS, &c., &c.

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21 DUKE STREET.

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NITROGLYCERINE TABLETS,

Tabellæ Nitroglycerini, B.P. 1885 (Martindale).

By authority of the Medical Council, the compilers of the British Pharmacopœia have adopted and made OFFICIAL Nitroglycerine Tablets, as manufactured by me during the last seven years.

The Nitroglycerine is in a perfectly fixed solution in the Chocolate. The Tablets are not prepared with Alcoholic solution of Nitroglycerine. They weigh ONLY 21 grains each, an ounce containing about 170 doses. They are sold at the following REDUCED prices to the trade, subject:—

In Boxes, Retail 2s. 6d. and 4s. 6d. each.

„ Trade 24s. and 43s. per doz.

FOR HOSPITALS AND DISPENSING:

In Bottles, Retail, 1-oz., 6s. 6d.; 2-oz., 10s.; 4-oz., 16s.; 8-oz., 27s.; and 16-oz., 48s. each.

„ Trade, „ 60s.; „ 96s.; „ 156s.; „ 264s.; „ „ 480s. per doz.

ORIGINAL INVENTOR—

W. MARTINDALE, PHARM. CHEMIST, 10 New Cavendish St., Portland Place, W.

BULLOCK'S PEPSINA PORCI. DOSE— 2 to 4 grains.

Since the introduction by Dr. LIONEL BEALE of PEPSINA PORCI, Mr. BULLOCK has devoted special attention to its manufacture.

BULLOCK'S ACID GLYCERINE OF PEPSINE, DOSE— 1 to 2 drms.

Possesses at least three times the digestive power (and in most cases considerably more) than any other preparation of Pepsine and Glycerine, or fluid form of Pepsine whatever.

May be prescribed with most substances compatible with Acids. In 4 oz., 8 oz., and 16 oz. Bottles, and in Bulk.

MESRS. BULLOCK & CO. beg to direct attention to an article by G. F. DOWDESWELL, Esq., B.A. (Cantab.), F.C.S., F.L.S., &c., on "Medicinal Pepsine and Artificial Digestion," which appeared in the *Practitioner* for March, 1886. In this paper Mr. DOWDESWELL gives the results of upwards of 200 experiments which conclusively demonstrated the marked superiority of BULLOCK'S PEPSINA PORCI and ACID GLYCERINE OF PEPSINE over every other Pepsine or Preparation of Pepsine—ENGLISH, FRENCH, GERMAN, or AMERICAN; and confirmed the equally favourable reports of Dr. PAVY (1863), Professor TUSON (1870), and the late Professor GARROD (1878), as to the pre-eminent value of BULLOCK'S PEPSINA PORCI. It may be added that many Pepsines and their preparations sold are inert.

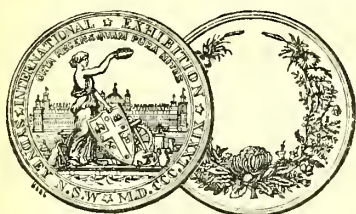
* * In prescribing either of the above preparations, it is suggested to insert in parenthesis as follows (BULLOCK).

J. L. BULLOCK & CO., 3 Hanover St., Hanover Sq., LONDON, W

Telegraphic Address,
"WHIFFEN, LONDON."

GOLD MEDALS.

Telegraphic Address,
"WHIFFEN, LONDON."



SYDNEY, 1879.



CALCUTTA, 1884.



MELBOURNE, 1880.

THOMAS WHIFFEN, BATTERSEA, LONDON,

Manufacturer of

QUININE,

WHITE AND UNBLEACHED SULPHATES. ALSO BISULPHATE,
MURIATE, BROMIDE, PHOSPHATE, CITRATE, SALICYLATE,
VALERIANATE CRYSTALS, ETC., ETC.

QUINIDINE, CINCHONIDINE, CINCHONINE, ETC.

QUINETUM.

The Alkaloids of India, Cinchona Succirubra Bark, and

QUINETUM SULPHATES.

LIQUID EXTRACT OF CINCHONA, P.B. 1885,

ALSO

LIQUID EXTRACT OF YELLOW CINCHONA, P.B. 1867.

SALICINE.

STRYCHNINE, "HULLE'S."

The Advertiser is the Proprietor and Inventor of this well-known Brand.

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Wholesale & Export Druggists



AND
MANUFACTURING PHARMACEUTICAL CHEMISTS
WHITE HORSE BUILDINGS,
101 HIGH HOLBORN, LONDON.

ESTABLISHED 1751.

DRUGS, CHEMICALS, AND PHARMACEUTICAL PREPARATIONS.

PRICE LISTS ON APPLICATION.

BURGESS, WILLOWS & FRANCIS,

Farmacéuticos albeitares y Droguistas al por mayor

(POR NOMBRAMIENTO ESPECIAL)

DEL REAL COLEGIO DE CIRUJANOS DE ALBEITERIA,
Del REAL COLEGIO de ALBEITERIA,
LONDRES, INGLATERRA.
(DESDE SU INAUGURACION).

WHITE HORSE BUILDINGS, 101 HIGH HOLBORN,
LONDRES, W.C., INGLATERRA.

(ESTABLECIDOS EN 1751.)

Se remitirán listas de las especialidades de la casa á quien las solicite.

Se solicita la correspondencia.

DRUGS, CHEMICALS, AND PHARMACEUTICAL PREPARATIONS.

BARRON, SQUIRE & CO.

(LATE DREW. BARRON, & CO.),

WHOLESALE & EXPORT DRUGGISTS,
BUSH LANE, LONDON, E.C.,

MANUFACTURERS OF ALL DESCRIPTIONS OF PHARMACEUTICAL PREPARATIONS,

Beg to inform Merchants, Shippers, &c., that all Indents entrusted to them will receive
careful attention and prompt execution.

Messrs. B., S. & Co. request the attention of their friends and the Trade, at home and abroad, to their
having PURCHASED THE BUSINESS of Messrs. JAMES BASS & SONS, Hatton Garden, and with it the
various Formulæ from which their Special Preparations have been made, and pledge themselves to supply them
in all their integrity.

Specimens of these Preparations have remained in the Museum of Kew Gardens during 23 years without deterioration.

DR RIDGE'S PATENT COOKED FOOD

FOR INFANTS & INVALIDS.

Sells better, keeps better, and gives more satisfaction, and is more extensively advertised than any other food.

Send for full particulars, Counter Bills, Show-cards, Almanacks, and Prices—

DR. RIDGE'S CO., ROYAL FOOD MILLS, LONDON, N.

GOLD MEDALS,
INTERNATIONAL INVENTIONS EXHIBITION, LONDON, 1885.
INTERNATIONAL EXHIBITION, PARIS, 1885.

IMPROVED HIGH TEST
BICARBONATE OF SODA,
SODÆ BICARB. PULV.

Containing 99 per cent. of Bicarbonate of Soda.

CRYSTAL CARBONATE

The Best Preventative of Boiler Incrustation, and the **PUREST**
 and **CHEAPEST** form of

SODA CRYSTALS.

One Ton of Crystal Carbonate contains as much Alkali as 48 cwt.
 of Soda Crystals.

JANUARY, 1886.

Price of ONE TON of

CRYSTAL CARBONATE,

F.O.R. WIDNES,

£5 9s. 0d.

Price of 48 CWT. of

SODA CRYSTAL,

F.O.R. WIDNES,

£6 18s. 0d.

GASKELL, DEACON & CO.,
WIDNES, ENGLAND.

MEDALLAS DE ORO,
EXPOSICION INTERNACIONAL DE INVENTOS, LÓNDRES, 1885.
EXPOSICION INTERNACIONAL DE PARIS, 1885.

BICARBONATO DE SODA

DE ALTA PRUEBA PERFECCIONADO,
SODÆ BICARB. PULV.

Conteniendo 99 por ciento de bicarbonato de soda.

CARBONATO CRISTALIZADO

La mejor preparacion para impedir la costra en las calderas, y la forma **MAS**
PURA y ECONÓMICA en que se pueden obtener

LA SODA CRISTALIZADA.

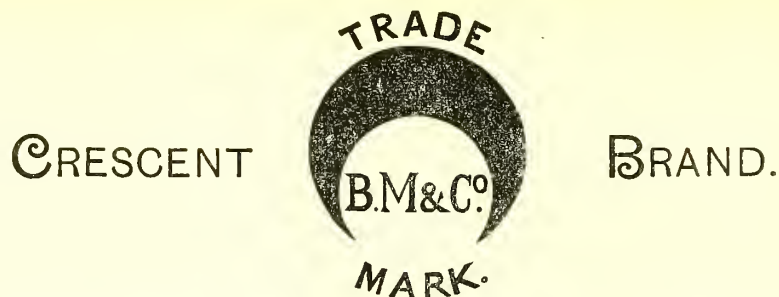
Una tonelada de carbonato cristalizado contiene la misma cantidad
 de alcalí que 48 quintales de soda cristalizada.

ENERO, 1886.

Precio de UNA TONELADA de
CARBONATO CRISTALIZADO,
F.Á.B. WIDNES,
PESETAS 136.25.

Precio de 48 QUINTALES de
SODA CRISTALIZADA,
F.Á.B. WIDNES,
PESETAS 172.50.

GASKELL, DEACON & CO.,
WIDNES. INGLATERRA.



BICARBONATE OF SODA,

REFINED AND RECRYSTALLIZED.
PURE AND CHEAP.

ANALYSIS.

Bicarbonate of Soda	...	...	...	...	96.81
Mono Carbonate of Soda	...	...	...	...	2.44
Sulphate of Soda	...	...	...	...	trace
Chloride of Sodium	}	...	...	...	.035
Chloride of Magnesia					
Moisture	...	...	...	...	.82
Insoluble	...	...	...	...	nil

PURE ALKALI,

GUARANTEED 58 DEGREES,
EQUAL TO 98 PER CENT. OF CARBONATE OF SODA.

Most economical form of Soda for the use of Printers,
Bleachers, Dyers; Glass, Paper, and Soap Makers.

BRUNNER, MOND & CO., LIM.,

*Manufacturers of Soda by the Ammonia Process
(Solvay's Patent),*

NORTHWICH, CHESHIRE.



BICARBONATO DE SOSA,

REFINADA Y RECRISTALIZADA.

PURA Y ECONÓMICA.

ANÁLISIS.

Bicarbonato de sosa	...	...	...	...	96.81
Mono carbonato de sosa	...	...	...	...	2.44
Sulfato de sosa	...	...	...	...	traza
Clorido de sodium	}	...	...	...	0.35
Clorido de magnesia		...	...	...
Humedad	...	...	...	...	.82
Partes insolubles	...	...	...	...	nil

ÁLCALI PURO,

GARANTIZADO DE 58 GRADOS.

ES EQUIVALENTE Á 98 P.C. DE CARBONATO DE SOSA.

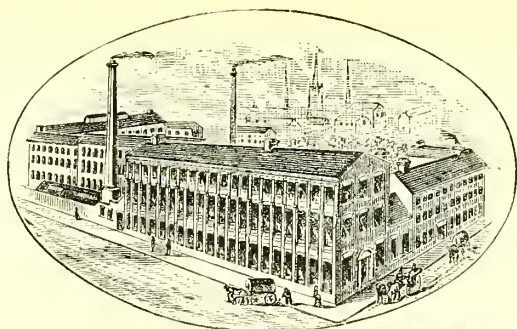
La forma mas económica de sosa para uso de los impresores, blanqueadores, tintoreros, y fabricantes de jabon.

BRUNNER, MOND & CO., LIM.,

Fabricantes de sosa (precedimiento de amoniaco)

(Patente de Solvay),

NORTHWICH, CHESHIRE, INGLATETRA.



Telegraphic Addresses { "WYLEYS COVENTRY;"
"WYLEYS LONDON."

WYLEYS & CO.

(PARTNERS: F. WILEY, M.R.C.S., ENG., L.S.A., AND W. F. WILEY, F.C.S.)

COVENTRY,

And 1a BURY STREET, ST. MARY AXE, LONDON, E.C.

(ESTABLISHED 1790),

MANUFACTURING AND ANALYTICAL CHEMISTS,
AND WHOLESALE AND EXPORT DRUGGISTS.

VIN. IPECAC. (Wyleys').

[NON-DEPOSITING AND STANDARDIZED.]

No preparation ever differed so much in strength as the old form of *Vin. Ipecac.*, as it steadily threw down its active principle in combination with the tannin and colouring matter of the wine, becoming gradually weaker. The new *Brit. Pharm.* has sought to remedy this defect, but, in the opinion of some of the best authorities, the heat employed and the exposure of evaporation cause it to be an equally unreliable preparation. Our new wine is prepared without heat, and fully represents the root.

GELATINE COATED OVAL PILLS.—The only oval gelatine-coated or capsuled Pills of English manufacture in the market. The distinctive colours of the ingredients contained within them show through the transparent coating; and our Capsuled Pills are admirably adapted for the administration of *single drugs*, as well as compound pill masses. Thus our *Quinine* ($\frac{1}{2}$ gr., 1 gr., and 2 gr.) Pills or Capsules are perfectly white, soluble, and tasteless. We also put up *Aloin*, *Camphor Monobrom*, *Cerii Oxalas*, *Croton Chloral*, *Pepsine*, &c., as well as smaller Capsulated Pills of *Morphia*, *Acid Arsenios*, *Picrotoxia*, &c.

PEARL COATED PILLS.—Special and extensive list on application.

POWDERED DRUGS.—All ground in our own mills, and of guaranteed purity.

EXTRACTS (ENGLISH).

CONCENTRATED INFUSIONS AND DECOCTIONS.

GRANULAR EFFERVESCENT PREPARATIONS.

GELATINE COATED HORSE BALLS.

Particulars of **COD LIVER OIL EMULSION, CHEKAN, HYPODERMIC ERGOTIN TUBES.**

FRICTION CAKES, &c., will be found in our LIST OF SPECIALTIES sent on application.

EXPORT DEPARTMENT.

Orders for Export receive every attention as to packing and the requirements of the Market for which goods are intended. Having direct representatives in Rio Janeiro and Valparaiso, we are in specially good position with reference to these markets.

SPANISH PRICE LISTS PUBLISHED QUARTERLY.

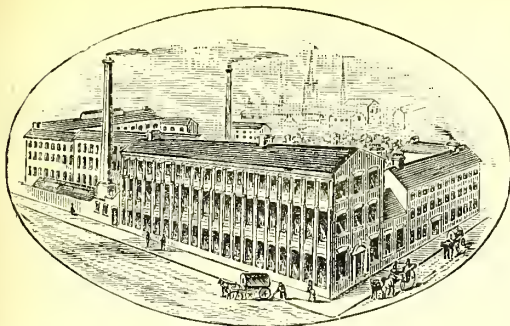
We shall be happy to forward English and Spanish Price Lists, Book of Order Forms, and Pill List, to any Chemist in the World on receipt of Business Card.

WYLEYS Y CA.,

COVENTRY,

And LONDON, 1a Bury Street, ST. MARY AXE.

Fabricantes de toda clase de Cocimientos é Infusiones concentradas, Espiríus, Extractos, Preparaciones efervescentes granuladas, Píldoras, Bujías, Pesarios, Supositorios, Acido carbólico, Creta carbolada, Preparaciones antisépticas y de muchas otras preparaciones especiales de la casa. Surtido completo de útiles para boticas y droguerías, perfumería, y de instrumentos de toda clase para cirugía, etc.



Citrato de magnesia de Wyleys y Cia.

Nuestra Preparación de Magnesía llamada "CITRATO DE WYLEYS" ya es demasiado conocida como una bebida salina efervescente para que haya necesidad que recomendarla. Todos los ingredientes son de la mejor clase y vienen reunidos en un solo frasco con su cuchara y la medida correspondiente.—En Botellas á 18-75 pesetas la docena.

Citrato de limon ó kali de Limon efervescente de Wyleys y Cia.

Esta Preparación llamada "LIMONADA REFRESCANTE DE WYLEYS" representa el jugo del Limon en una forma concentrada y forma una bebida muy saludable en la estación del verano. Todos los ingredientes vienen en un solo frasco con cuchara y medida de madera.—En Botellas á 18-75 pesetas la docena.

Polvos Efervescentes de Seidlitz de Wyleys y Cia.

Llamados "SAL DE WYLEYS" también tienen todos los ingredientes en un solo frasco. Es un purgante muy suave y refrescante y se debe tomar con preferencia por la mañana y en ayunas.

Como varia en sus efectos purgantes según la constitución y fuerzas de las personas, aunque la medida que acompaña cada botella es una buena guía general, sin embargo es mejor que cada uno estudie sus efectos para saber la cantidad que conviene á sí mismo.—En Botellas á 20 pesetas la docena.

Magnesia fluida de Wyleys y Cia.

Las ventajas que posee esta elegante preparación, altamente carbonada, de Magnesía, son que tiene todas las propiedades de la Magnesía ordinaria, pero no forma las secreciones peligrosas en los intestinos que resultan del uso de la Magnesía sólida; corrige la acidez del estómago, la cardialgia, sin hacer mal al estómago, como lo hacen los carbonatos de soda y de potassa.—En Botellas á 8-75 pesetas la docena.

Linimento de Wyleys y Cia.

CONTRA EL REUMATISMO Y CONSTIPADOS.

Nos permitimos ofrecer este Linimento preparado según la receta de un Facultativo Europeo eminente, y que ha tenido buena aceptación con resultados muy favorables.—En Botellas á 12-50 pesetas la docena.

Sarsaparilla concentrada de Wyleys y Cia.

Llamamos particularmente la atención á esta magnífica preparación de Sarsaparilla, que ha tenido un éxito completo y que es de muchísima aceptación, gracias á sus buenos efectos.—En Botellas á 30 pesetas la docena.

Crema de aceite de higado de bacalao con hipofosfito de cal.

Cada cucharada contiene dos cucharillas del aceite puro de Nornega y dos granos de hipofosfito de cal. Frascos de $\frac{1}{2}$ lba., 22-50 pesetas; 1 lba., 40 pesetas la docena.

Aceite de higado de bacalao con fósforo, quinina y estricnina.

La dracma fluida tiene $\frac{1}{2}$ gr. de quinina, $\frac{1}{4}$ gr. de estricnina, y $\frac{1}{100}$ gr. de fósforo. 6-25 pesetas lba.; 40 pesetas la docena.

Tabletas de fricción de Wyleys y Cia. ("Friction Cakes.")

Fuimos los primeros en introducir los linimentos en una forma sólida con el nombre arriba indicado. Serán de suma utilidad en todas las casos en que el frotamiento es ventajosa. La superficie de la tableta es lisa, y agradable á la piel, y comunica rápidamente una cantidad suficiente de las drogas de que se compone, al mismo tiempo es bastante dura para permitir una fricción activa cuando sea necesario.

BELLADONNA, ACONITO, Y OPIO.—Representa cumplidamente la belladonna y el aconito con la adición de los constituyentes del opio.—Precio, 10 pesetas la docena.

CAPSICINE.—Refiriendo á nuestras tabletas de capscine el *British Trade Journal* de 14 de Abril, 1883, dice: "El valor del pimienta como una aplicación local en lumbago, reumatismo, ciática, mialgia, y muchas otras afecciones penosas, ha sido largo tiempo reconocido. La ("Friction Cake") tableta de fricción es un preparado del pimienta de Guinea mezclada con una substancia untuosa para formar un palito, con que se puede fácilmente frotar la parte afectada. Es un rubefaciente poderoso, que produce un escozor en pocos minutos, y será una adición útil á los medios existentes para el tratamiento de casos muy obstinados."—Precio, 5 pesetas la docena.

Conos de menthol.

Una forma muy conveniente para la aplicación local de esta droga en los casos de reumatismo, neuralgia, etc., y que consiste de menthol puro sin mezcla de otra substancia alguna. Expedimos los tres siguientes tamaños. No. 1, peso medio, 170 granos, precio, 5 pesetas. No. 2, peso medio, 135 granos, precio, 4-40 pesetas por docena. No. 3, peso medio, 100 granos, precio, 3-75 pesetas la docena.

Cascara sagrada (Rhamnus Purshiana).

Remedio reconocido para la constipación, usados muchos años en América y ya haciéndose conocer en Inglaterra. En dosis limitadas sirve de aperiente suave, y produce retortijones, pero en los casos de constipación habituales debe tomarse diariamente por una temporada, pero siempre en pequeñas dosis. **Ext. Cascarae Sagradae Liq. (de Wyleys)**, cuya dosis es: Como aperiente ocasional, de 1 á 2 dracmas; ó en los casos permanentes, 30 minutos tres veces al día. Precio, 12-50 pesetas la lba.

Jar. hipofosf. com. (de Wyleys).

Preparamos este jarabe de las fuerzas siguientes. Cada dracma fluida contiene:—

Hipofosfato de hierro .. 1 gr.	Hipofosfato de manganos $\frac{1}{2}$ gr.
" cal .. 1 $\frac{1}{2}$ "	" quina .. $\frac{1}{4}$ "
" potassa 1 "	" estricnina $\frac{1}{100}$ "

Precio en frascos de 1 lba., 4-40 pesetas; $\frac{1}{2}$ lba., 2-50 pesetas.

Mist. bismuthi comp. (de Wyleys).

Esta preparación la expedimos de la fuerza siguiente. Cada $\frac{1}{2}$ dracma fluida es equivalente á:—Tr. Nux Vom. m. 8; Acid. Hidroclor. F.B. m. 2; Morph. Mur. gr. $\frac{1}{4}$; Liq. Bismuthi, m. 60; amalgamada con cloroformo y aromáticos y dotada de color como Tr. Carl. Comp. Dosis: 15 á 30 minimos.

ME LBOURNE,

ADELAIDE,

BRIGHTON,

NEW ZEALAND



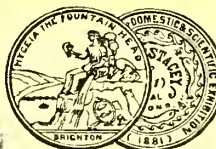
1880.



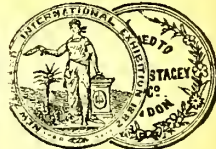
1881.



TRADE MARK.



1883.



1882.

CORBYN, STACEY & CO.

BRITISH PHARMACOPŒIA—1885.

Coca, Fine Green.
 Cocainæ Hydrochloras.
 Ext. Cascaræ Sagradæ.
 Ext. Cascaræ Sagradæ Liq.
 Ext. Cimicifugæ Liq.
 Ext. Gelsemii Alcoholicum.
 Ext. Rhamni Frang. Liq.
 Inf. Cinchonæ Acidum.
 Inject. Apomorphinæ Hypod.

Inject. Ergotini Hypod.
 Lamellæ Atropinæ.
 Lamellæ Cocainæ.
 Lamellæ Physostigmatinæ.
 Liq. Morphinæ Bimecon.
 Liq. Sodii Ethylatis.
 Oleatum Hydrargyri.
 Oleatum Zinci.
 Tabellæ Nitroglycerini.

EXTRACT. CINCHONÆ LIQUIDUM.

Prepared from selected Red Cinchona Bark, and contains five per cent. of Total Alkaloids, and the equivalent of two per cent. of Sulphate of Quinine.

AND ALL PREPARATIONS OF THE BRITISH PHARMACOPŒIA, 1885.

“NOTES ON DRUGS, etc.,” 22nd Edition.

The following have been added since our Last Edition :—

Atropia Salicylate.
 Cerium Valerianate.
 Chionanthus Virginica.
 Chloral Oleate.
 Cocaine.
 Conia Hydrobromate.
 Cuprea Bark.
 Cypripedium Pubescens.
 Esculus Glabra.
 Gentiana Quinquiflora.

Glycerinum Aluminis.
 Helonias Dioica.
 Hydrangea Arborescens.
 Keratin.
 Kola Nut.
 Leptandria Virginica.
 Lycopus Virginica.
 Manaca.
 Menispermum Canadense.
 Myrica Cerifera.
 Naphthaline.

Penthorum Sedoides.
 Polymnia Uvedalia.
 Ptelia Trifoliata.
 Quinine Fluoride.
 Sabbatia Elliotti.
 Scutellaria Laterifolia.
 Sizygium Jambolanum.
 Soda Taurocholate.
 Thuja Occidentalis.
 Ustilago Maidis.
 Xanthoxylum Frazineum.

VINUM COCÆ CORBYN.

Prepared from carefully-collected Leaves of Erythroxylon Coca. It retains the fragrant aroma of the plant, and is especially adapted for Children and Delicate Persons as a general Tonic and Restorative.

PURE TEREbene

SPECIALLY PREPARED FOR INTERNAL USE.

This new remedy has been employed by Dr. Murrell in Winter Coughs, Phthisis, Chronic Bronchitis, &c., with most satisfactory results.—See “Brit. Med. Journal,” Dec. 12, 1885.

Pure Terebene is a colourless liquid of an agreeable odour of fresh sawn pine, and is pleasant to take.

PRICE LIST and “NOTES ON DRUGS, &c.,” 22nd edit., forwarded on application.

JANUARY, 1886.]

LIST OF CHEMICAL PREPARATIONS

MANUFACTURED BY

MAY & BAKER

(W. G. BAKER, R. C. HEATH, T. TYRER, W. E. B. BLENKINSOP),

Garden Wharf, Church Road, Battersea,
LONDON, S.W.



TELEGRAPHIC ADDRESS, "BISMUTH LONDON."

MEDALS,

1851, 1855, 1862, 1867, 1885.

WHOLESALE AND EXPORT ONLY.

PRICES ON APPLICATION.

MAY & BAKER,

ACID BENZOIC oz.
(Warranted from the gum, and to preserve its colour.)

"	GALLIC (M. & B.)	...	...	lb.
"	HYDROCHLOR B.P.	...	...	cwt.
"	HYDROBROMIC B.P.	...	...	lb.
"	NITRIC 1.420 B.P.	...	...	cwt.
"	"	SPECIALLY FOR ANALYSIS	...	"
"	"	PURE 1.500	...	"
"	"	COML. 1.360	...	"
"	NITROS 1.360 TO 1.400	...	...	"
"	OLEIC	...	...	lb.
"	PHOSPHORIC DIL. B.P.	...	...	"
"	"	B.P. 1.500	...	"
"	"	CONC. 1.760	...	"
"	PYROGALLIC ANG. (M. & B.)	...	...	oz.
"	SULPHURIC PURE B.P.	...	...	lb.
"	SULPHUROUS P.B.	...	...	cwt.

ÆTHER RECT. C.750	...	...	lb.
"	"	C.730 WASHED	"
"	"	O.735 B.P.	"
"	"	PURUS O.720 B.P.	"
"	"	METHYLATED O.750	"
"	"	"	O.735
"	"	"	O.730
"	"	(Adapted for Ice-making.)	"
"	"	"	O.725
"	"	"	O.725
"	"	(Triply Rectified.)	"
"	"	"	O.720
"	"	"	O.717
"	"	(Absolute Anæsthetic.)	"
"	ACETIC	...	"
"	CHLORIC	...	"

ALCOHOL AMMONIATED

ALUMINIUM OLEATE

AMMONIÆ LIQUOR B.P.
" " O.880
(Specially Pure.)

AMMONIUM BENZOATE	...	...	"
"	CARB. RESUB.	...	"
"	NITRATE	...	"
"	OXALATE	...	"
"	PHOSPHATE	...	"
"	CHLORIDE PURE	...	"
"	HYDROSULPH FORT	...	"

ANTIMONY CROCUS PULV.	...	...	"
"	"	LUMP	"
"	"	CRUDE PULV.	"
"	"	LUMP	"
"	"	CHLORIDE SOLUT	"
"	"	(Butter Antimony.)	"

ANTIMONY TERCHLOR. SOL. B.P.
" OXIDE B.P.

ANTIMONY GOLDEN SULPHIDE	...	...	lb.
"	"	POT. TART. PULV.	"
"	"	" CRIST.	"

ANTIMONIAL POWDER B.P.

BISMUTH OXIDE B.P.	...	...	"
"	"	CITRATE B.P.	"
"	"	COSMETIC	"
"	"	AND AMMON. CIT. SOLUT.	"
"	"	"	SCALES
"	"	"	PULV.
"	"	OLEATE	"
"	"	PHOSPHATE	"
"	"	SUBCARB. B.P.	"
"	"	"	NIT. B.P.
"	"	"	LEVIG

CALCIUM CARB. PRECIP.	...	...	cwt.
"	"	PHOSPHATE	"
"	"	SULPHITE PUR.	"
"	"	"	COML.
"	"	BISULPHITE SOLUT.	"
"	"	(For Antiseptic and Brewers' use.)	"

CALOMEL B.P.
(Absolutely Pure.)

CAMPHOR REFINED (BELLS)	...	...	"
"	"	FLOWERS	"
"	"	TABLETS (M. & B.), 3 to 4 in. square	"
"	"	(In 1-lb. or 7-lb. Boxes.)	"
"	"	TABLETS (M. & B.), 2 to 1½ in. square	"
"	"	(In 1-lb. or 7-lb. Boxes.)	"
"	"	TABLETS (M. & B.), 2 to 1½ in. square	"
"	"	(In 1-lb. or 7-lb. Boxes.)	"
"	"	TABLETS (M. & B.), 1 in. sq. (2 or 3 to oz.)	"
"	"	(In 1-lb. or 7-lb. Boxes.)	"
"	"	TABLETS (M. & B.), 1 in. sq. (2 or 3 to oz.)	"
"	"	(In 1-lb. or 7-lb. Boxes.)	"
"	"	TABLETS (M. & B.), (4 to oz.)	"
"	"	(In Boxes.)	"

2½ o/o
14 days.

CARBON BISULPHIDE cwt.

CHALK PRECIPITATED

CORROSIVE SUBLIMATE
" (LARGE LUMPS)

COPPER NITRATE	...	...	cwt.
"	"	OXIDE PURE	"
"	"	SULPHATE, PURIF.	"
"	"	(For Electrolytic use.)	"

ESSENCE APPLE, CONCENTRATED	...	...	lb.
"	"	APRICOT	"
"	"	BANANA	"
"	"	CHERRY	"
"	"	CURRENTS	"
"	"	GOOSEBERRY	"
"	"	ORANGE	"

FROM PURE SUGAR.

GARDEN WHARF, BATTERSEA.

ESSENCE	PEACH, CONCENTRATED	...	...	lb.
"	PEAR	...	...	"
"	PINE APPLE	...	...	"
"	PLUM	...	...	"
"	QUINCE	...	...	"
"	RIPSTON PIPPIN	...	...	"
"	RASPBERRY	...	...	"
"	STRAWBERRY	...	...	"
"	VANILLA	...	...	"

FROM PURE SPIRIT.

GLAUBER'S SALTS ... cwt.
(2 cwt. Casks charged for.)

HARTSHORN VOLATILE SOLUT. ... lb.

IRON	CARBONATE PRECIP.	...	...	"
"	IODIDE	...	...	"
"	PERCHLORIDE CRIST.	...	...	"
"	" SOLUT. B.P.	...	...	cwt.
"	PHOSPHATE	...	...	lb.

LIME BISULPHITE SOLUT. ... cwt.
(For Brewers' use.)

"	CHLORINATED SOLUT.	...	...	"
"	SULPHIDE SOLUT.	...	...	"

LEAD	ACETATE PURE	...	...	"
"	IODIDE	...	...	lb.
"	OLEATE	...	...	"
"	SUBACETATE SOLUT.	...	...	cwt.

MAGNESIA	CALCINED. HEAVY	...	...	lb.
"	CARBONATE	...	...	cwt.
"	BICARB. SOLUT.	...	...	"
"	SULPHATE EXSICC.	...	...	"
"	SULPHITE	...	...	"

MERCURY	AMMONIATED	...	...	lb.
"	BICHLORIDE	...	...	"
"	CHLORIDE	...	...	"
"	(Absolutely Pure.)	...	...	"
"	CHLORIDE CRIST.	...	...	"
"	WITH CHALK	...	...	"
"	IODIDE RED	...	...	"
"	" GREEN	...	...	"
"	OLEATE, 5 0/0	...	...	"
"	" 10	...	...	"
"	" 20	...	...	"
"	OXIDE YELLOW B.P.	...	...	"
"	" RED CRIST.	...	...	"
"	" LEVIG	...	...	"
"	PERSULPHATE (WHITE)	...	...	"
"	PROTOSULPHATE (GREY)	...	...	"
"	(For Batteries.)	...	...	"
"	SUBSULPHATE (YELLOW)	...	...	"
"	(Turpeth Mineral.)	...	...	"
"	WITH SULPHUR	...	...	"

MERCURIAL OINTMENT ...
" PILL ...
(Also every Mercurial Preparation.)

OIL OF ÆTHER ... lb.
OLEATES (SHOEMAKER'S FORMULÆ) ... "

POTASSIUM	ACETATE	(In 4-oz. Bottles, 10½d.)	...	"
"	OXALATE	...	...	"
"	SULPHATE CRIST.	...	...	cwt.
"	" PULV.	...	...	"
"	TARTRATE	...	...	lb.
"	CYANIDE GOLD	...	...	"
"	" SILVER	...	...	"
"	" STICKS	...	...	"
"	" COMMERCIAL	...	...	"
"	" STICKS	...	...	"
"	SULPHURET COML.	...	...	"

RED PRECIPITATE CRIST. ...
" " LEVIGATED ...

SODIUM	ACETATE PURE	...	...	"
"	BENZOATE	...	...	"
"	BISULPHITE	...	...	cwt.
"	CARBONATE PURE CRIST.	...	...	"
"	" EXSICC.	...	...	"
"	CHLORINATED SOLUT.	...	...	"
"	PHOSPHATE CRIST.	...	...	"
"	" EXSICC.	...	...	"
"	POT TART. PULV.	...	...	"
"	SULPHITE	...	...	"
"	TUNGSTATE	...	...	lb.

SOLUTION	IRON ACETATE CONC. B.P.	...	...	"
"	PERNITRATE B.P.	...	...	"
"	PERSULPHATE B.P.	...	...	"
"	MERCURY PERNITRATE B.P.	...	...	"

SPIRITS	ÆTHER COMP. P.B.	...	...	"
"	" NIT. 0.845	...	...	"
"	" 0.850	...	...	"
"	" B.P.	...	...	"
"	" AMMON. AROM.	...	...	"
"	" B.P.	...	...	"
"	" FÆTID	...	...	"

SULPHUR PRECIP. PURE ... cwt.
(Fine Texture and Colour.)
" IODIDE ... lb.

TIN PROTOCHLOR ...
(For Electrolytic use.)

WHITE PRECIPITATE ...

ZINC	ACETATE	...	...	"
"	CARBONATE PRECIP.	...	...	"
"	CHLORIDE SOLUT.	...	...	cwt.
"	OLEATE	...	...	lb.
"	" PULV.	...	...	"
"	OXIDE PRECIP.	...	...	"
"	" B.P.	...	...	"
"	SULPHATE PURIF.	...	...	cwt.

WHOLESALE ONLY.

TELEGRAPHIC ADDRESS, "BISMUTH LONDON."



January 1886.

Manufacturers of Fine and General Chemicals.

SPECIAL ATTENTION IS DRAWN TO OUR

SUBLIMED TRANSPARENT TABLET CAMPHOR

PACKED IN BOXES

IN CONVENIENT SIZES AND WEIGHTS AS BELOW—

CAMPBOR TABLETS	M. & B.,	3 TO 4 IN. SQR.	...	...	...	...	...	...
		(In 4 or 7 lb. Boxes.)						
"	"	"	2 TO 1½ IN. SQR.	...	...	...	...	...
			(In 4 or 7 lb. Boxes.)					
"	"	"	2 TO 1½ IN. SQR.	...	...	...	...	...
			(In 1 or 2 lb. Boxes.)					
"	"	"	1 IN. SQR. (2 OR 3 TO OZ.)	...	...	...	...	...
			(In 4 or 7 lb. Boxes.)					
"	"	"	1 IN. SQR. (2 OR 3 TO OZ.)	...	...	...	...	...
			(In 1 or 2 lb. Boxes.)					
"	"	"	4 TO THE OZ.	...	...	...	...	...
			(In Boxes.)					

QUOTATIONS, SUBJECT TO THE FLUCTUATIONS OF THE MARKET, MAY BE HAD ON APPLICATION.

WHOLESALE AND EXPORT ONLY.

6 Prize Gold & other Medals. Numerous Diplomas & Certificates,

AWARDED THE GENUINE ARTICLE, THE LEADING AND SALEABLE OF ITS KIND.

ROYAL WARRANT TO THE



QUEEN & COURT OF HOLLAND.

CERTIFICATE OF MERIT,



H.R.H.
PRINCE OF WALES

CRYSTAL PALACE BOND'S GOLD MEDAL MARKING INK

PREPARED BY THE DAUGHTER OF THE LATE JOHN BOND



DIRECTIONS IN FOREIGN LANGUAGES NOW ENCLOSED WITH EACH BOTTLE.

CAUTION.—In ordering from the wholesale, please state Crystal Palace Bond's Ink is required, as Prepared by the Daughter of the late John Bond. Kindly examine each parcel received, as complaints are daily being made of other inks being substituted.



£100 REWARD

Will be paid to whosoever shall give information, followed by conviction of those Agents that palm off an imitation in place of my well known Ink.

Facsimile of the Genuine 6d. & 1/- Blue Wrapper Label.

Inventor of the Crystal Palace Marking Ink Pedestal, with Ink, Pen, and Linen Stretcher.



ILLUSTRATED PRICE LIST FREE ON APPLICATION.

PLEASE NOTE ONLY ADDRESS,

WORKS: 75 SOUTHGATE ROAD, LONDON, ENGLAND.

SIXTEEN PRIZE GOLD & OTHER MEDALS.

BY ROYAL WARRANT TO

AWARDED THE

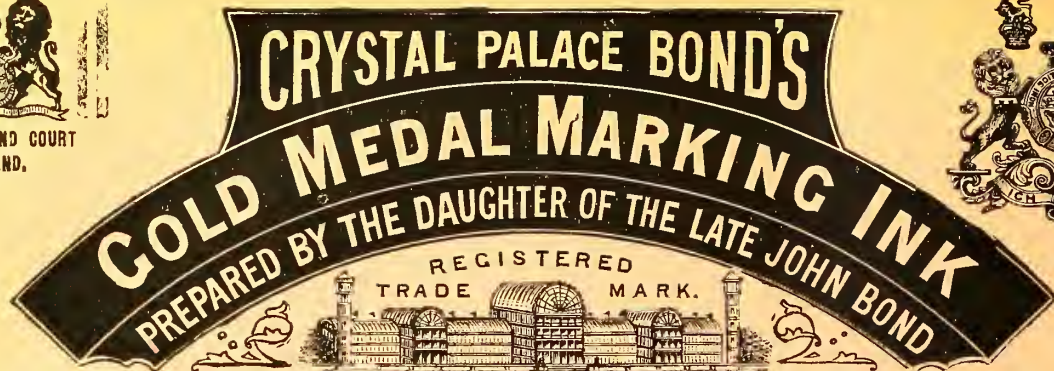
CERTIFICATE OF MERIT



THE QUEEN AND COURT
OF HOLLAND.

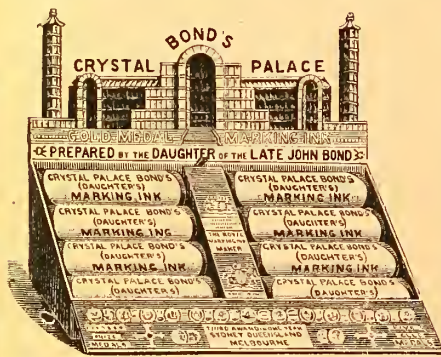


H.R.H.
PRINCE OF WALES



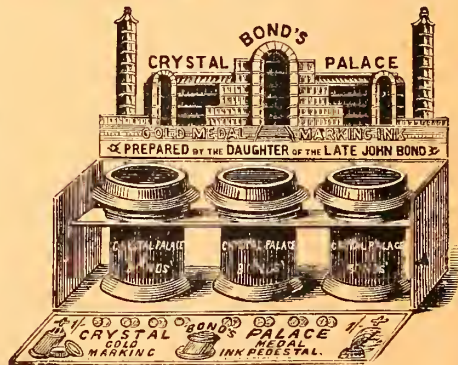
THE CRYSTAL PALACE.

NO HEATING REQUIRED UNLESS PREFERRED. WILL RESIST BOILING CHLORIDE OF LIME.



NOTICE !!

We shall be pleased to supply the Trade with Framed Linen Specimens, also Handbills, free on application, to any address, carriage paid.



Blue Wrapper Inks, 1s. in $\frac{1}{2}$ doz. and 6d. in 1 doz. Boxes, or on very attractive Embossed Gold Show Cards of 1 doz. Pedestal Inks, 1s. in $\frac{1}{2}$ doz. and 6d. in 1 doz. Boxes.

JOHN BOND'S CRYSTAL PALACE INDELIBLE MARKING INK PENCIL. TURNS BLACK WHILE WRITING, QUICK AS LIGHTNING. NO HEATING OR WARMING REQUIRED.



Will resist Soap, Soda, Bleaching Powders, Acids, and the like, the Brush, and other destructive appliances, used by some Laundresses. 72/- per gross.

SOMETHING NEW.

A LARGE
GLASS-STOPPERED BOTTLE

OF
MARKING INK

(Three times size of an ordinary 1s. Bottle)

AND GLASS PEN
COMPLETE

1/6

Handsomely Mounted on Show Cards of $\frac{1}{2}$ doz., try a sample $\frac{1}{2}$ doz., will guarantee quick sale and repeat order.

90/- PER GROSS.



PURVEYORS TO THE LORDS COMMISSIONERS OF THE ADMIRALTY.

THE ROYAL MARKING INK MANUFACTURE

WORKS: 75 SOUTHGATE ROAD, LONDON, ENGLAND.

CERTIFICATE OF MERIT.



H.R.H.
PRINCE OF WALES

REGISTERED
TRADE MARK



THE CRYSTAL PALACE

FACSIMILE OF 6d. AND 1s. LABELS.



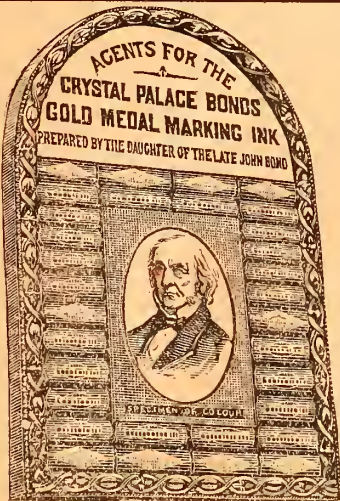
FACSIMILE OF 6d. AND 1s. LABELS.



6d. Blue Wrappers, boxed or carded ..	30/-
1/- " " " " " " " " " " " "	60/-
6d. Pedestals, boxed	36/-
1/- " " " " " " " " " " " "	72/-

6d. Blue Wrappers, carded	24/-
1/- " " "	48/-

A COMBINED Show Card and Glass Case, the neatest and most attractive manner of displaying goods ever devised, can be either hung up or placed on counter or window, easel fashion; the centre attraction being a drawing of one of the eminent men of the day, executed in Ink, and forming a specimen of colour after repeated washing and boiling. Purchasers are therefore requested to kindly state on order the portrait required. First Series: THE RIGHT HON. W. E. GLADSTONE, or the late EARL BEACONSFIELD. Contents, 3 doz. each, 6d. and 1s.; the whole comprised in a Gilt Frame of the best English make 25s.



BY ordering Six dozen each 6d.
and 1s. Blue Wrappers, an
elegant **Bent Glass Ebonized
Show Case**, measuring 19 by 9, on
which the following words appear,
written in gold: "Agents for the Crystal
Palace Bond's (Daughter's) Gold Medal
Marking Ink," thus showing the public
at a glance where to obtain this world-
wide advertised preparation, in con-
sequence of daily complaints by the
public and the trade, of other inks
being substituted. 45s.

WORKS: 75 SOUTHGATE ROAD, LONDON, ENGLAND.

PURVEYORS TO THE LORDS COMMISSIONERS OF THE ADMIRALTY

ADVERTENCIA.

Márquese la Ropa con la

TINTA DE MARCAR DE LA MEDALLA DE ORO

(DE BOND) "CRYSTAL PALACE,"

Preparada por la Hija del finado JOHN BOND.

16 Medallas de Premio de Oro y Plata y numerosos Certificados y Diplomas han sido concedidos al Fabricante de la REAL TINTA DE MARCAR.



Esta Tinta no requiere preparacion alguna ántes de usarse. Resiste hasta el cloruro de cal hirviendo. Se surte á la Comision del Almirantazgo, á los Agentes del Gobierno Inglés para las Colonias, á la Reina y la Corte de Holanda, y ha sido premiada con numerosas Medallas de Oro y Plata, y otras recompensas y Certificados, en las varias Exposiciones Internacionales en Londres, París, Lyons, Filadelfia y otras partes, así como tambien en las Exposiciones celebradas por muchas Sociedades Científicas é Industriales. Entre estas últimas recompensas pueden mencionarse la primera Medalla de Oro de la Academia de Manufacturas y Comercio de París, acompañada de un informe altamente favorable en la "Gaceta Oficial," así como tambien un premio en la Exposicion de Sydney igual á una Medalla de Plata, y la primera recompensa en la Exposicion de Melbourne.

La gran reputacion que goza esta Tinta ha sido motivo de muchas falsificaciones de la Marca de Fábrica pero los privilegios originales han sido incontestablemente establecidos en donde quiera que ha habido un caso judicial. (Véanse los pleitos, terminados siempre con costas é indemnizaciones en favor del demandante.)

ES DE SUMA IMPORTANCIA

y esencial, debido á las viles imitaciones que cuando se pida esta preparacion de fama universal, se consigne claramente el título "CRYSTAL PALACE (BOND'S) INK," la preparada por la Hija del finado JOHN BOND, inventor del pedestal, con tinta, plumas y estirador para el tejido.

EL REQUISITO DEL SIGLO, UN LAPIZ PERFECTO DE TINTA PARA MARCAR.

Se hace negro indeleble con la rapidez del rayo, en el acto de escribir.



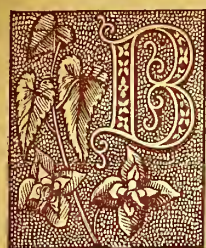
NO REQUIERE CALOR.

Prueba contra el jabon, la sosa, los polvos de blanquear ácidos y sustancias análogas así como tambien la brocha y otros artículos destructivos empleados por algunas lavanderas.

Para la venta al por menor, á 60 céntimos y 1.25 pesetas.

Elegantemente montados sobre cartones de media docena. Si no son aprobados se devolverá gustoso el dinero.

Oficinas y Fábricas:—75, SOUTHGATE ROAD, LONDRES, N.



RATBY & HINGHLIFFE,

Aerated Water Engineers,

—AND—

MANUFACTURING CHEMISTS.

INTENDING PURCHASERS OF SODA WATER MACHINERY, ETC., ARE RESPECTFULLY
INVITED TO CAREFULLY READ THE ENCLOSED.

SODA WATER MACHINERY.

THE WORLD RENOWNED

“MONARCH” Turnover
Filling Machine

→ “RAPID” Cork Bottling Machine. ←

Bratby & Hinchliffe,

Branches at 146, Minories, LONDON, E.C.; South Fifth Avenue,
NEW YORK; George St., SYDNEY; MELBOURNE, ALLAHABAD & Uitenhage.

Head Office and Warehouse:

SANDFORD ST., ANCOATS, MANCHESTER.

THE "DEFIANCE."

THIS MACHINE IS MADE IN TWO SIZES.

No 1, complete as shown, with fast and loose pulleys, starting gear, turned and polished fly wheel, 2½ in. gun-metal pump, and 6 gallon cylinder, weighing 160-lbs.; pressure and water gauges, patent blow-back safety valve and will make 12,000 bottles of pure high-class aerated waters per day.

A novel feature in this machine is that it can be made double its size, providing the wants of the purchaser ever require it, by simply adding another pump and cylinder, so that the purchaser is under no necessity of disposing of his machine because it is too small.

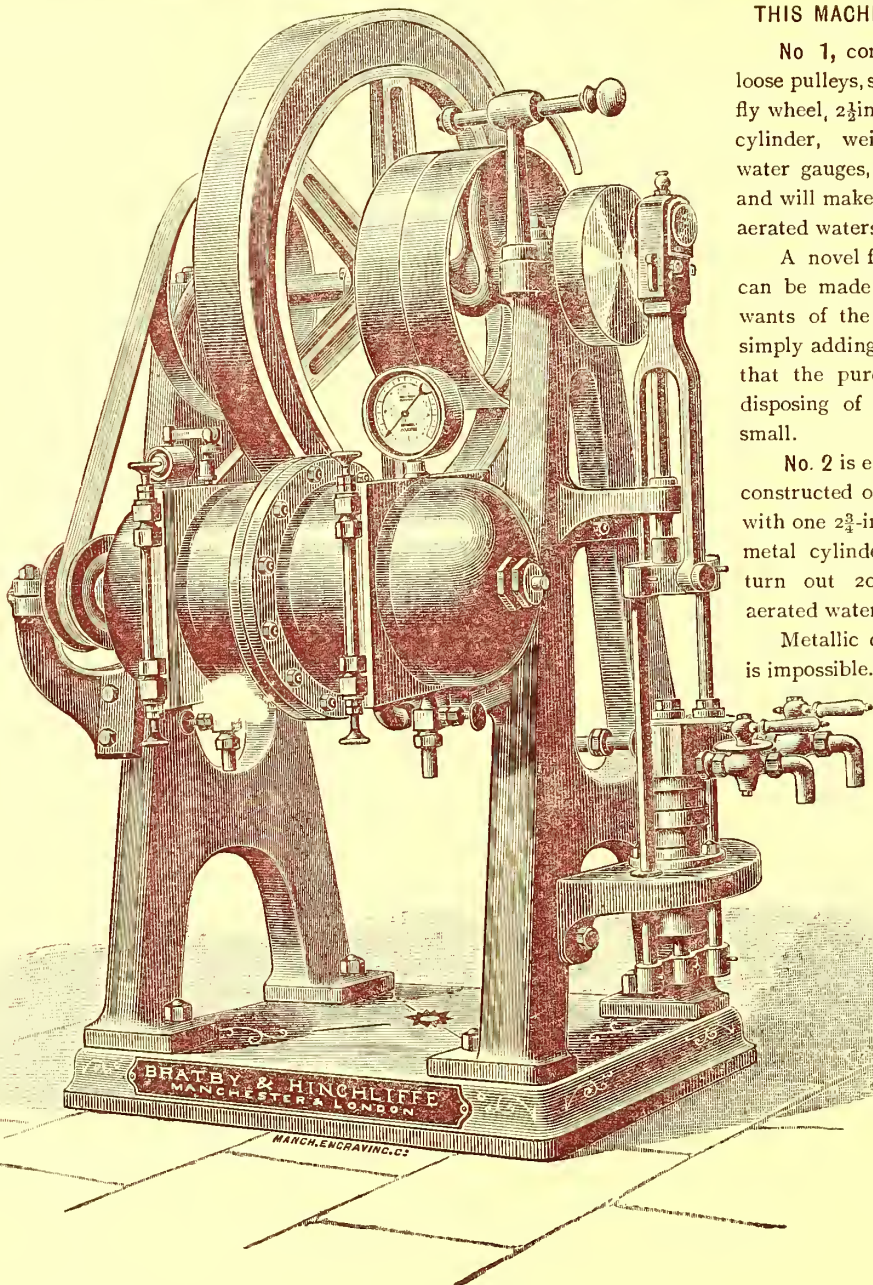
No. 2 is exactly the same as the No. 1, but constructed on a larger principle. It is fitted with one 2¾-in. pump and 9 gallon strong gun-metal cylinder, weighing 240-lbs.; and will turn out 20,000 bottles of pure high-class aerated waters per day.

Metallic contamination in these machines is impossible.

The machines are sent out complete as shown, with holding down bolts, copper solution pan, with ball cock. The machines form the strongest and most serviceable article obtainable.

The cylinders are tested to 500-lbs. pressure to the square inch; and firmly bolted to one side of the machine, there being room on the other side for another cylinder when one is required.

FULL INSTRUCTIONS
WORK SENT OUT
WITH EACH MACHINE



PRICES.—No. 1, with 2½-in. pump and 6 gallon cylinder, to make 12,000 bottles per day £61 10.
 „ 2, with 2¾-in. „ 9 „ „ 20,000 „ „ 79 15.

Larger Machines, to make from 2,000 to 4,000 dozen per day always in stock, viz., "ENTERPRISE,"
 "FORTRESS," "CHANCELLOR." &c.

EXPERIENCED WORKMEN SENT TO ALL PARTS TO FIX AND START READY FOR WORK. &c.
 Estimates free on Application.

BRATBY & HINCHLIFFE, Aerated Water Engineers, &c.,
 Head Office & Warehouse: | SANDFORD STREET, ANCOATS, MANCHESTER

BRATBY & HINCHLIFFE'S

NEW "MONARCH"

TURNOVER FILLING MACHINE.

The "Monarch" Fills and Syrups
Codd's and all kinds of
INTERNAL STOPPERED BOTTLES

With one motion, at the rate of 60 doz. large
and 80 doz. splits per hour.

THE
Syrup Pump is fitted with Glass Barrel,
And is the most reliable Syrup Pump in the
market.

*Simply turn the Machine round, and the
bottle Syrups and Fills.*

Having no Tube, the Syrup Pump
can be regulated to a nicety.
And does not work when bottling Soda Water alone.

The "Monarch" will replace all other Machines
At the rate of Fifty per month.

It saves 20 per cent. in Gas alone.

A BOY OR GIRL CAN WORK IT WITH EASE.

**STRONG, LABOUR-SAVING, and
ECONOMICAL.**

THE SYRUP PUMP EMPTIES ITSELF AT
EVERY STROKE,

This has never yet been accomplished by any Turnover
Filling Machine.

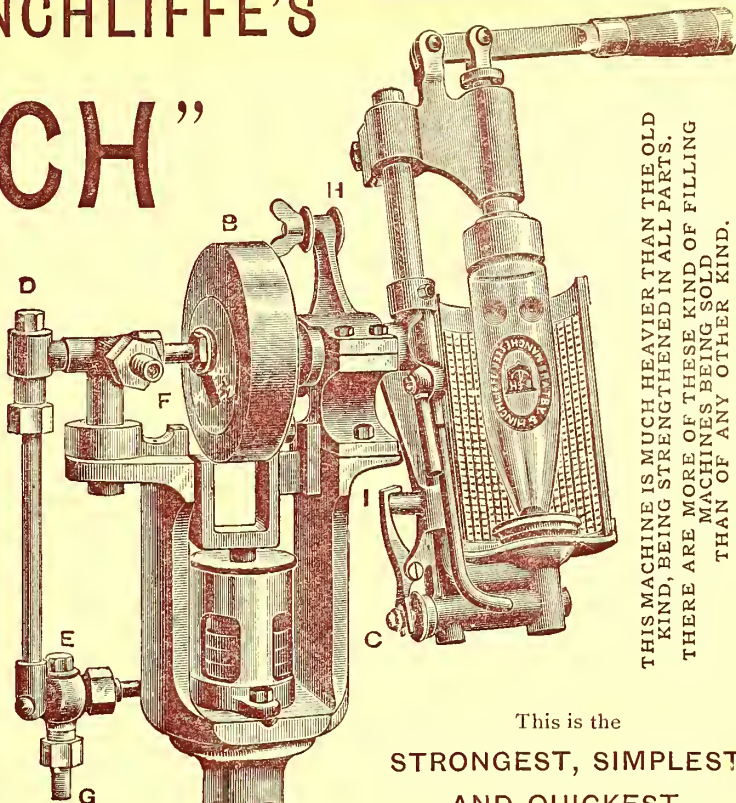
NO WASTE OF SYRUP.

HAVING BUT FEW WORKING PARTS, IT IS
NOT LIABLE TO GET OUT OF ORDER.

SPECIAL NOTICE:—

This is by far the cheapest
Machine at £10 10s.
Than any other in the market at half the cost.

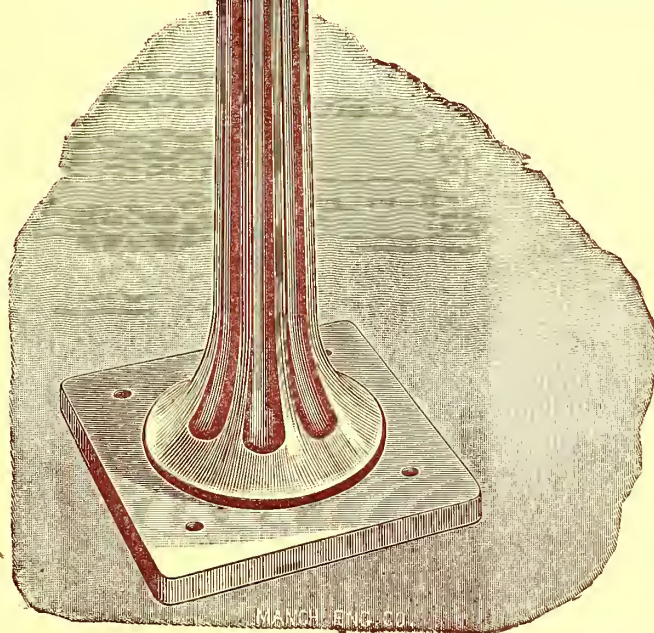
Each Machine is thoroughly tested before
being sent out.



THIS MACHINE IS MUCH HEAVIER THAN THE OLD
KIND, BEING STRENGTHENED IN ALL PARTS.
THERE ARE MORE OF THESE KIND OF FILLING
MACHINES BEING SOLD
THAN OF ANY OTHER KIND.

This is the
**STRONGEST, SIMPLEST,
AND QUICKEST,
Machine in the Market.**

THE DEMAND
already
EXCEEDS THE SUPPLY.



PRICES.
With glass barrel Syrup Pump, and all our
latest improvements £10 10 7
Without Syrup Pump 7 7

Head Office and Warehouse : Sandford Street, Ancoats, MANCHESTER.

BRATBY & HINCHLIFFE'S "RAPID" CORK BOTTLING MACHINE

WE have much pleasure in introducing our New Rapid Cork Bottling Machine, the patentee being the original inventor of steam bottling machines, which he first introduced in the year 1877, and knowing fully all the great and many disadvantages of that system, he has been induced to perfect a Hand Machine that would combine all the advantages, but without the defects of the steam bottling machines. This is at last successfully accomplished. The New Rapid Cork Bottling Machine is nearly, if not quite, as quick as any steam bottler, far more reliable, and is not one quarter the cost.

The machine is fitted with a syrup pump of the most simple construction, which is worked by the corking lever, and the syrup CANNOT BE FORGOTTEN OR MISSED.

The bottler has only to handle the bottle once, that is to put it under the machine. When it is filled it discharges itself down the shoots to the wirers; two wirers being required to keep the machine at work; 50-dozen large, or 60-dozen splits being filled per hour without hurrying.

This machine is not one fourth the price of a steam bottler, and will do as much work.

←→ ADVANTAGES. ←→

Quality and regularity of the Waters produced.

GREAT SAVING IN BREAKAGE COST AND GENERAL UTILITY.

QUICKNESS.

Skilled labour entirely dispensed with.

*A boy or girl can work it, and fill
60-dozen per hour with ease.*

**STEAM FILLING MACHINES
ENTIRELY DISPENSED WITH.**

**MORE RELIABLE AND ALMOST AS
QUICK AS A STEAM BOTTLER.**

**THE QUICKEST AND MOST EFFECTIVE CORK BOTTLING
MACHINE IN THE MARKET.**

This Machine Entirely Ejects all Atmospheric Air from the Bottles.

N.B.—There is already a great demand for these machines, and we respectfully inform the trade that as all orders will be executed in rotation, they will oblige by placing orders for next season as early as possible.

←→ PRICES. ←→

Complete with Syrup Pump and all the improvements	£15 15 0
Without Syrup Pump	12 12 0
Shoots, guard, and self-acting kicker included.	



BRATBY & HINCHLIFFE,

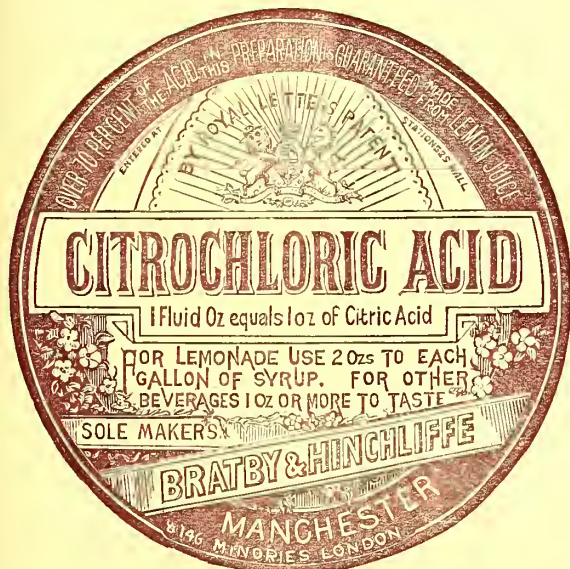
Head Office and Warehouse: SANDFORD STREET, ANCOATS, MANCHESTER.

BRATBY & HINCHLIFFE'S CITROCHLORIC ACID.

BY ROYAL LETTERS PATENT.

AN IMPROVED ACID FOR ACIDULATING AERATED BEVERAGES. SUPERSEDES CITRIC AND TARTARIC ACIDS, AND AT ONE HALF THE COST.

None Genuine unless bearing our Copyright Label
And Dr. Thresh's Certificate.



See that every Cask and Jar is branded Bratby & Hinchliffe

Guaranteed FREE FROM LEAD, COPPER,
or other METALLIC IMPURITIES.

SEND FOR OUR

Recently issued Pamphlet,
Containing Medical Opinion and Analytical Reports.

PRICES & TERMS.

In 1 to 3 gallon wickered Jars, 1/- per lb.; In 4 to 6
gallon wickered Jars, 11d. per lb.; 9 gallon casks and
upwards, 10d.

Free on Rails Manchester or London.

Jars and casks charged extra. Full price allowed if
returned in good condition, etc., carriage paid.

DIRECTIONS FOR USE.

To one gallon of Syrup for Lemonade, Ginger Ale, etc.,
add two fluid ounces of the acid, and use $1\frac{1}{2}$ fluid
ounce of the syrup for the full-size (10-oz.) bottle.

SOLUBLE FRUIT ESSENCES

AND

ESSENTIAL OILS.

OIL OF LEMON, NEW SEASON'S CROP.

PURE SOLUBLE ESSENCE GINGER ALE.

SOLUBLE ESSENCE JAMAICA GINGER.

ORANGE CHAMPAGNE, "HOT TOM," "WINTER."

ACIDS, HEADINGS, AND COLOURINGS GUARANTEED PERFECTLY PURE.

Send for our newly revised Price List

BRATBY & HINCHLIFFE,
Head Offices: Sandford Street, Ancoats, **MANCHESTER.**

"Bottle of the Period"

AFTER CODD'S "PREMIER."



THESE ARE UNDOUBTEDLY
The best, cheapest,
and most useful
BOTTLES IN THE MARKET.

NO ROYALTY TO PAY.

CAN BE THOROUGHLY
BRUSHED OUT
Without fear of loosening the ring
or getting the brush fast.

Acknowledged by all to be
BEST AND MOST SIMPLE.

Cleanly, Durable, and Effective.

Sample bottle free for 12 penny stamps

PRICES.

Full size 10-oz. bottles	
complete ...	17/- P gross
Split 5-oz. do.	15/- "

Extra Strong Bottles for Export, 2/- per gross extra.

The "BULB."

AFTER CODD'S PATENT.



THE BALL IS LARGER THAN
THE MOUTH OF BOTTLE
AND CANNOT BLOW OUT.

EASILY FILLED and
EASILY OPENED.

The Stopper is retained in the neck
when pouring out.

THE STOPPER IS A GLASS MARBLE
AND MAKES A PERFECT JOINT.

No Royalty to Pay.

The Stopper cannot fall into the
neck while emptying.

PRICES.

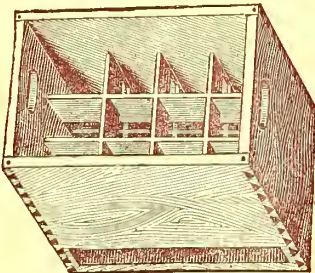
Full size 10-oz. bottles	
complete ...	17/- P gross.
Split 5-oz. do	15/- "

PLACE YOUR ORDERS AT ONCE TO ENSURE PROMPT DELIVERY.

In all cases where Bottles are ordered, they should be packed in our Boxes or Cases. Much breakage is avoided, and they save freight, and are also invaluable for export purposes. Any name can be put upon them.

BOXES and CASES.

VAN BOXES.—Class A.



width of box, so that they do not get fast one inside the other when piled up.

For Prices and Sizes see our Illustrated Catalogue and "Monthly List."

VAN BOXES.—Class B.



BRATBY & HINCHLIFFE,

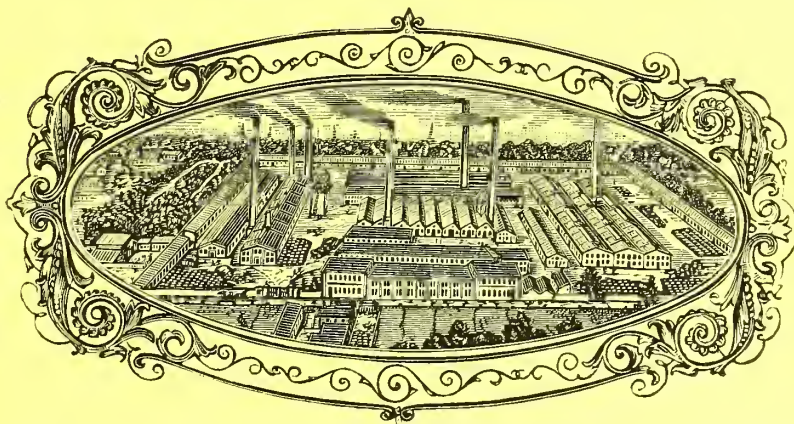
Head Office and Warehouse: Sandford St., Ancoats, MANCHESTER.

E. DE HAËN,

LIST, near HANOVER (Germany).

PRIZE MEDALS:

PARIS, 1867
VIENNA, 1873
HANOVER, 1878
ANTWERP, 1885



AGENTS

in all the
Principal Towns
in the World.

CHEMICAL WORKS. Established 1861.

London Agents: DOMEIER & CO., 13 St. Mary-at-Hill, E.C.
New York Agents: ROGERS & PYATT, 80 Maiden Lane, P. O. Box 3642.

Manufacturer of CHEMICALS for TECHNICAL and PHARMACEUTICAL PURPOSES.

The following are the most important:

Ammonium

Ammonium Chloride sublimed
" Carbonate (Sal volatile)
" Chloride cryst. chem pure
" Sulphate pure
Liquid Ammonia
Ammonium Nitrate
" Phosphate

Aluminium

Aluminium Chloride liquid
" Oxide hydrated, Soluble in Acetic Acid
" Acetate
" Sulphate chem. pure
Sodium Aluminate

Antimony

Antimony Sulphide (Penta) red
(Golden Sulphide), for medicinal and vulcanising purposes

Antimony (cont.)

Antimony Sulphide (Ter) black
" Chloride
" Metal
" Oxides
Kermes

Arsenic

Arsenic Acid
Sodium Arseniate
Potassium Arseniate
Arsenic Sulphide precipitated
Arsenic Metal

Barium

Barium Chloride
" Nitrate cryst. technical and pure for fireworks
" Hyperoxide
" Oxide hydrated, cryst.
" Carbonate precipit.
" Chlorate

Barium (cont.)

Barium Chromate
" Sulphocyanide
" Sulphate precipit.
" Sulphide

Bismuth

Bismuth Subnitrate
" Chloride
" Metallic pure, free from Arsenic
" Carbonate

Boron

Boric Acid pure
Manganese Borate, whitest (Siccatif)
Borax calcined

Bromine

Potassium Bromide
Sodium Bromide

Cadmium

Cadmium Metal
 „ Sulphide
 „ Salts

Calcium

Calcium Acetate white
 „ Bisulphite
 „ Carbonate precipit.
 „ Chloride
 „ Oxide, whitest from marble
 „ Phosphate precipit.
 „ Phosphide
 „ Sulphite

Cerium

Cerium Oxalate
 „ Sulphate

Chromium

Cromium Metal for Steelmakers
 „ Oxide
 Chromic Acid
 Chrome Alum
 Ammonium Bichromate
 Baryum Chromate
 Potassium Chromate neutral
 Sodium Chromate

Cobalt

Cobalt Oxides
 „ Salts

Copper

Copper Metal precipit
 „ Oxide, black
 „ „ red
 „ Carbonate precipit.
 „ Chloride
 „ Nitrate
 „ Sulphide fused & precip
 „ Sulphate chem. pure

Fluorine

Hydrofluoric Acid
 Hydrofluosilicic Acid
 Ammonium Fluoride
 Sodium Fluoride

Iron

Iron Perchloride
 „ Oxide
 „ Metal reduced by Hydrogen
 „ Salts
 „ Alum
 „ Sulphide Fused

Lead

Lead Hyperoxide
 „ Nitrate
 „ Sulphate precipit.

Lead (cont.)

Lead Hyposulphite
 „ Chloride
 „ Chromate

Lithium

Lithium Carbonate
 „ Chloride
 „ Sulphate

Magnesium

Magnesium Carbonate
 „ Chloride
 „ Sulphite
 Magnesite calcined, lumps & powder

Manganese

Manganese Oxide hydrated, for Varnish
 „ Borate (Siccatis)
 „ Hyperoxide precipit.
 „ Carbonate
 „ Chloride cryst.
 „ Sulphate
 Potassium Permanganate

Mercury

Mercury, red Oxide pure levigated
 „ Sulphate
 „ Sulphocyanide

Molybdenum

Molybdic Acid
 Ammonium Molybdate

Nickel

Nickel Oxide
 „ Sulphate
 „ Sulphate and Ammonia
 „ Metal

Platinum, Gold and Silver

Oxides and Salts

Potassium

Potassa Fusa
 Potassium Acetate
 „ Arseniate
 „ Bicarbonate
 „ Bromide
 „ Carbonate chem. pure
 „ Chloride pure
 „ Chlorate chem. pure
 „ Cyanide
 „ Permanganate cryst.
 „ Oxalate neutral
 „ Phosphate
 „ Sulphate pure
 „ Tartrate neutral
 „ Sulphide (liver of Sulphur)

Sodium

Soda Caustic pure
 Sodium Arseniate
 „ Bicarbonate chem. pure, cryst. and powder
 „ Bisulphite
 „ Carbonate chem. pure
 „ Chlorate
 „ Phosphate
 „ Chromate neutral
 „ Hyposulphite
 „ Nitrate chem. pure
 „ Nitrite
 „ Pyrophosphate
 „ Stannate
 „ Sulphide cryst.
 „ Sulphate
 „ Sulphite
 „ Tungstate

Strontium

Strontium Nitrate
 „ Chloride
 „ Oxide
 „ Sulphate precipit.
 „ Carbonate precipit.

Sulphur

Sulphur Chloride
 „ precipitated

Tin

Tin Oxide
 „ Bichloride
 Sodium Stannate
 Tin Ammonio Chloride (Pink Salt)

Tungsten

Tungstene (Wolframium), Metal for Steelmakers
 Acid Tungstic
 Sodium Tangstate

Uranium

Uranium Oxide
 „ Salts

Vanadium

Vanadium Chloride
 Ammonium Vanadate

Zinc

Zinc Metal chem. pure
 „ Oxide precipit. pure
 „ Chloride powder and liquid
 „ Sulphate cryst. techn. and chem. pure

PEROXIDE OF HYDROGEN,

For Bleaching Feathers, Ivory, Hairs, Silk, Wool, etc.

Acids

Acid Hydrochloric chem. pure

„ Nitric	„	„
„ Sulphuric	„	„
„ Benzoic		
„ Butyric		
„ Formic		
„ Gallic		
„ Succinic		
„ Valerianic		

Acid Carbolic

redistilled medicinal and liquid for disinfecting purposes.

Acid Phosphoric and Salts

Acid Phosphoric liquid chem. pure

„	„	„	techn.
„	„	glacial	sticks and lumps

Sodium Phosphate

Potassium Phosphate

Acid Phosphoric and Salts (cont.)

Ammonium Phosphate
Calcium Phosphate precipit.
Calcium Phosphide
Calcium Hypophosphite

Alum

Alum Ammonia pure

„ Chrome
„ Iron, cryst.
„ Potash pure
„ Sodium
„ calcined

Chlorates

Chlorate of Baryum

„ „ Sodium

Glycerine, distilled, refined, and crude

Sulphites

Sodium Sulphite
Calcium „
Sodium Bisulphite
Calcium „

Sulphocyanides (Rhodan)

Aluminium Sulphocyanide

Ammonium	„
Barium	„
Lead	„
Calcium	„
Potassium	„
Copper	„

Tannin

Tannic Acid pure for dyers

Acetone

Albumen from egg and blood

Alcannin (Extract of Alcanna)

Amylalcohol (Fusel Oil)

Casein

Creasote from Beechwood Tar

Mirbane-Oil

Naphtaline, crude, pure and chem. pure

Oil Animal, crude and rectif.

Oil Birch, for preparing Russia leather

E. de Haen supplies various other Chemicals, as per Special Catalogue, sent on application.

MINERAL WATER SPECIALITIES

For securing Excellence and Economy in the Manufacture of Mineral Waters.



Rylands' "Reliance" Globe-Stoppered Bottles

Superior to Codd's. Can be inclined two ways in pouring out.

Rylands' Crystal Valve Self-Opener Bottles

The best Bottles in the world. Require no Opener. Simple, safe, and clean.

Rylands' New Bulb Globe-Stoppered Bottles

The Cheapest Bottles in the market.

Codd's Globe-Stoppered Soda Water Bottles



MANUFACTURED BY

DAN RYLANDS

(LATE CODD & RYLANDS),
HOPE GLASS WORKS, BARNSELEY,
ENGLAND,

Proprietor of the Patent Rights of Codd's Patent Bottle Co., London District, Sole Right to make for every Licensee in United Kingdom, and Sole Maker for Export of Codd's Patent Bottles.

Proprietor of all Patent Rights and Sole Maker of



McEWEN'S
ECONOMICAL SODA WATER MACHINERY
McEWEN'S

"RAPID PARAGON" FILLER.



For description of which see following pages.

SOLE PATENTEE AND MANUFACTURER OF THE

CELEBRATED WIRE-BOUND BOXES,

The strongest, neatest, lightest, and most durable Box yet introduced.

Made in all Sizes and Shapes.

Send for Illustrated Catalogue and Price List, Post Free from
DAN RYLANDS (late CODD & RYLANDS),
HOPE GLASS WORKS, BARNSELEY, and
62, KING WILLIAM ST., LONDON, E.C.

Barnsley Telegraphic Address—"Rylands, Barnsley." London Telegraphic Address—"Rillands, London."

Essences, Labels, and every Mineral Water Appliance supplied.

DAN RYLANDS' (late J. McEwen & Co.'s) Gold Medal Patent ECONOMICAL SODA-WATER MACHINERY

Produces the Highest Class Mineral Waters of every description. The Machinery is provided with Glass Pump Barrels, being a speciality never before attempted in Aerated Water Pumps, thus securing absolutely pure and uncontaminated Aerated Waters. The Machinery is fitted up with the Patent Anti-Atmospheric Generator and Automatic Condensing Cylinder and Acid Feeder, and is acknowledged to be the most Economical in the World.

THE ADVANTAGES CLAIMED FOR THIS MACHINERY ARE :—

Economy in Acid.

From the peculiar automatic action of the Acid Feeder, and its stopping the acid when the whiting is spent and not allowing acid to go on spent material, which is a great saving. And by the charge and discharge of the whiting through the tap all atmospheric air is excluded, and the gas usually lost in charging is saved.

Economy in Space.

The space required not being above half what is usually taken up by Aerated Water Plants.

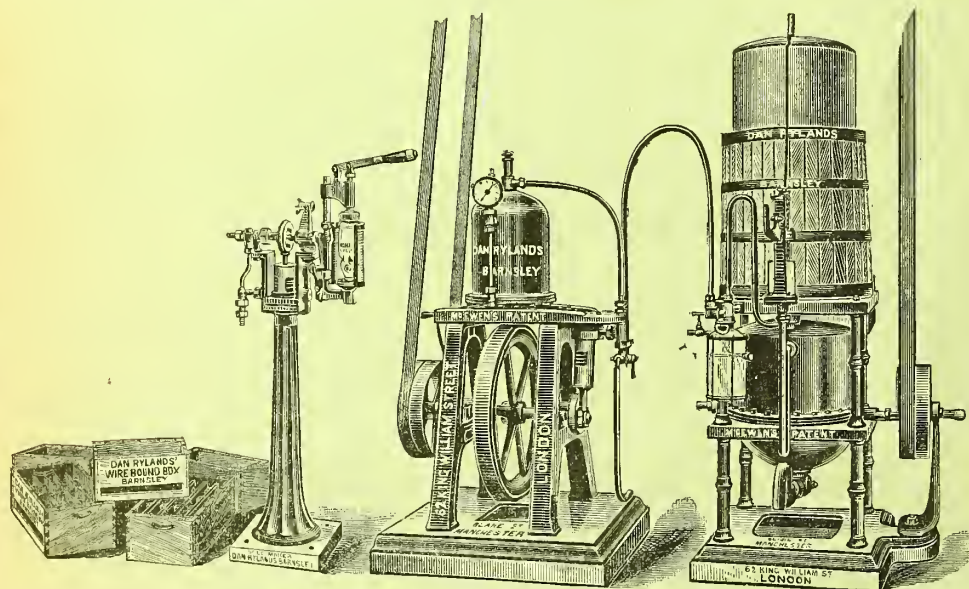
Economy in Power.

The automatic action of the cylinder being perfect, and the simplicity of the pump reducing all friction, so that not more than half the usual power is required.

Economy in Labour.

No attention being required from the charge going in until the bell rings to warn the bottler that the charge is spent, and the largest size can be discharged, washed out, and re-charged in three minutes.

**SAVES 30 PER CENT.
IN MATERIALS.**



**SAVES 50 PER CENT.
IN DRIVING POWER.**

PRICES COMPLETE.

No. 0, or Chemist's Plant.—Can be worked by a Boy by Hand and makes from 100 to 150 dozens per day				£35
No. 1	400	"	"	£56
No. 2	600	"	"	£68
No. 3	800	"	"	£82
No. 4	1,000	"	"	£96
No. 5	2,000	"	"	£125
No. 6	3,000	"	"	£175

Book of Instructions for Fixing and Using supplied with each Machine.

PROPRIETOR OF ALL PATENT RIGHTS AND SOLE MAKER :

DAN RYLANDS (late Codd & Rylands),
GLASS BOTTLE MAKER AND MINERAL WATER ENGINEER,
HOPE GLASS WORKS, BARNLEY, ENGLAND.

LONDON OFFICES: 62, KING WILLIAM STREET, E.C.

DAN RYLANDS'
RAPID PARAGON
TURNOVER FILLING MACHINE,

(McEwen's 1880 and 1885 Patents.)

Fills and Syrups Rylands' Crystal Valve and all Globe or other
Internally Stoppered Bottles

WITH ONE MOTION
at the rate of 80 doz. Splits and 60 doz. Large per hour.

Already **1800** SOLD.

Its Syrup Pump is the most reliable.
The Best in the Market for Patents.
Double the strength of the old Machines.
Skilled Labour entirely dispensed with.
A Boy or Girl can work it with ease.
There is no waste of Syrup.
Fewer working parts, and less liable to get out of order.
In use all over the World.
Rapidly superseding all other Machines.

~~~~~  
**The Simplest, Quickest, Strongest, & Best.**  
~~~~~

With Glass-Barrelled Syrup Pump and all Improvements,
complete, £9 9 0.



~~~~~  
**A Thousand Testimonials.**  
~~~~~

CAUTION.—The Agency of Messrs. Bratby & Hinchliffe for this Filler and all
McEwen's Machinery is cancelled, and Buyers are warned against inferior
imitations. To secure the original and genuine Machine, orders should be
forwarded direct to the Sole Maker:

DAN RYLANDS (late Codd & Rylands),
GLASS BOTTLE MAKER AND MINERAL WATER ENGINEER,
HOPE GLASS WORKS, BARNSELEY, ENGLAND.

LONDON OFFICES: 62, KING WILLIAM STREET, E.C.

DAN RYLANDS' SPECIALITIES.

IMPORTANT TO THE TRADE.

DAN RYLANDS (late Codd & Rylands) begs to inform the Mineral Water Trade that he is **Proprietor of all the Patent Rights**, as well as the Business, Goodwill, and Works of the late firm of **CODD & RYLANDS**; and that in view of certain circulars recently issued by Mr. Hiram Codd (his late partner), Mr. E. Macnaghten, Q.C., M.P., the Arbitrator appointed by the Deed of Dissolution, has by an award, dated 21st December, 1885, determined that Mr. Codd is not entitled to manufacture bottles made on the line of Codd's expired Patents, until all Codd's Patents mentioned in such Deed have expired, which will be some years yet. By the same award, Mr. Codd is precluded from ever again soliciting orders for bottles made on the lines of Codd's expired Patents in London Postal District.

DAN RYLANDS is **Patentee for London** and **Sole Maker for Export** of Codd's Patent Bottles; and has the Sole Right to take Orders from **every Licensee in the United Kingdom**. All Orders should be sent or indented direct to **DAN RYLANDS**.

Mr. Hiram Codd is bound not to solicit, or cause or permit any other person to solicit, orders for Codd's Patent Bottles in the *London Postal District*, in which District **DAN RYLANDS** is Patentee. Messrs. Barnett & Foster have also no right to solicit or take orders for these Bottles in London Postal District.

DAN RYLANDS is now **Proprietor of all Patent Rights** and the Business and Goodwill of the late firm of **J. McEWEN & Co.**, Mineral Water Machinery Engineers, Manchester.

He is now Sole Maker of **McEWEN's Patent "RAPID PARAGON" FILLER**, of which **1800** have already been sold. This Machine is well known as the Simplest, Quickest, Strongest, and Cheapest Filler in the market.

DAN RYLANDS' Economical GOLD MEDAL SODA WATER MACHINERY is gradually replacing the old style of machinery.

The Agency of Messrs. BRATBY & HINCHLIFFE for the "Rapid Paragon" Filler and all **McEWEN's Patent Machinery** is now cancelled. Buyers are cautioned against all spurious imitations, and to secure the genuine Machines should send or indent their Orders direct to

DAN RYLANDS (late Codd & Rylands),

GLASS BOTTLE MANUFACTURER & MINERAL WATER ENGINEER,

AND GENERAL SUPPLIER TO THE MINERAL WATER TRADE,

Hope Glass Works and Box Factory, Barnsley, England.

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Notice to Chemists, Manufacturers, &c.

The

DESIDERATUM MIXER

BRACHER'S PATENT

A Real Time, Labour, and Money Saver.

ILLUSTRATED PRICE LIST OF MIXING MACHINES

MANUFACTURED BY

BRACHER & COMPANY,

Inventors and Patentees,

WINCANTON AND YEOVIL, SOMERSET, ENGLAND.

UNEQUALLED FOR

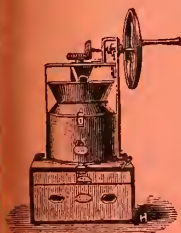
Portable Mixing Machines for Counter use, no
Outlet below.

Ref. let.	Size	lbs.	Diam.	Complete with sieve and crusher.	£	s.	d.
A	No. 1 mixes about	4	7-in.	..	1	0	0
B	" 2 "	7	10-in.	..	1	5	0
C	" 3 "	14	12-in.	..	1	17	6

Extra Sieves each—any mesh up to,
and including 60 holes to the inch.

Sieves above 60, viz.:—

No.	1	2	3	70	80	90	100	120
..	4/-	5/-	6/-	4/6	5/-	6/-	7/6	10/-
..	5/-	6/-	7/-	6/-	7/-	8/6	10/-	12/-
..	6/-	7/-	8/6	7/-	8/6	10/-	12/-	14/-

Mixing Machines with Taper Sieve and Outlet
underneath, fitted with Handle and
Flywheel, on Bench with Drawer.

Ref. letter	Size	lbs.	Diam.	Complete with sieve and crusher.	£	s.	d.
N	No. 5 mixes about	40	16-in.	-	7	15	0
O	" 6 "	56	20-in.	-	10	15	0
P	" 7 "	112	23-in.	-	15	10	0

Extra Sieves each—any mesh up to, and
including 30 holes to the inch.

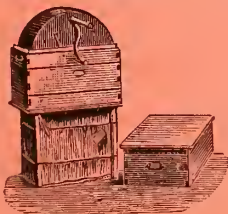
Sieves above 30, viz.:—

No.	5	6	7	40	60	70	80
..	10/-	12/6	15/-	11/-	12/-	13/-	14/-
..	12/6	15/-	17/6	15/-	17/6	20/-	22/6
..	15/-	17/6	20/-	17/6	20/-	22/6	25/-

To prevent mistakes when ordering, please quote Reference Letter of Alphabet, and full particulars as to Sieves, &c.
All Sizes are kept in Stock, but Sieves are manufactured only on Receipt of Order. Estimates given for Larger Sizes.

BRACHER'S PORTABLE "DESIDERATUM" TEA MIXER.

Unequalled
for
Blending Teas,
Seeds,
Feeding Meals,
Corn,
&c., &c.



Securing the
best
possible results,
in the least
possible time,
and at the
lowest possible
cost.

SIZES AND PRICES.

No.	1	2	3	4	Mixes about	20 lbs.	30	45	60	£	s.	d.
..	2	10	0
..	3	0	0
..	4	0	0
..	5	0	0

Estimates given for Larger Sizes.

All Communications to be Addressed—"BRACHER & COMPANY, WINCANTON, SOMERSET."

[FOR TESTIMONIALS SEE NEXT PAGE.]

The "DESIDERATUM" MIXER

BRACHER' PATENT MIXING MACHINES,

DESIGNED AND MANUFACTURED BY

BRACHER & Comp., Inventors and Patentees, Wincanton and Yeovil, Somerset

TESTIMONIALS.

Cork, 10/10/84.
Gentlemen,—In reply to annexed query, the Sifter answered my purposes extremely well, and has given me much satisfaction. What would be the price of one suited for laboratory purposes with recent improvements, and what are the improvements? Particulars will oblige,

Messrs. P. H. Bracher & Co.

Yours truly,
T. R. LESTER.

Market Weighton, Jan. 5th, 1885.
Gentlemen,—In your "Grocer" advertisement, you say you send valuable recipes to purchasers of your Machines. I had one from you a few months ago, with which I have been well satisfied. Shall be obliged if you will send me the receipts mentioned and oblige.

Messrs. P. H. Bracher & Co.

Yours truly,
M. LYON.

Grimsby, Jan. 24th, 1885.
Having two of your "Desideratum" Mixing Machines we are able to judge their utility, &c. We may say that they are highly satisfactory, saving time, annoyance (from the acid), also preventing waste.

Messrs. Bracher & Co.

Yours truly,
CHESMAN & Co.

Wakefield, Feb. 24th, 1885.
Highly approved of. Simplicity is only one of its good qualities.

Messrs. Bracher & Co.

Yours truly,
H. HARDMAN.

Stacksteads, 2 mo., 25th/85.
Respected Friends,—The "Desideratum" Mixer I bought of you on 10 mo., 10/83, has been used in the Establishment ever since, and has given general satisfaction.

P. H. Bracher & Co.

Yours sincerely,
JAMES TURNER.

West Street, Gateshead-on-Tyne, Feb. 25th, 1885.
Sirs,—I am pleased to say the Mixer you sent me gives complete satisfaction, it does its work in first-class style, and saves considerable time and labour.

Messrs. P. H. Bracher & Co.

W. CLARKE.

Yeovil, Feb. 26th, 1885.
Gentlemen,—I have pleasure in informing you the "Desideratum" Mixer supplied to me by you, does its work thoroughly.

Messrs. P. H. Bracher & Co.

Yours truly,
J. H. DAWE.

Torrington, Feb. 26th, 1885.
Gentlemen,—I am perfectly satisfied with the Mixer I had from you twelve months ago, and am quite convinced that the first cost of the machine is soon saved, as there is no waste. While I continue to sell Baking Powder I shall make it with your "Desideratum" Mixer.

Messrs. Bracher & Co.

I am, Gentlemen, yours respectfully,
H. NORTON.

G. H. LODGE,
Manufacturing Chemist, Wholesale Druggist, Oil
and Colour Merchant,
5 & 7, Church Street, Rotherham, 26th Feb., 1885.

Gentlemen,—The "Desideratum" Mixer had from you some twelve months has saved itself in powder and labour already, we can thoroughly recommend them to all requiring a good Powder Mixer.

Messrs. P. H. Bracher & Co.

G. H. LODGE.

D. WILLIAMS JONES,
Manufacturing and Agricultural Chemist, Erwood,
28th Feb., 1885.

Gentlemen,—I have very great pleasure in bearing testimony to the excellence of the "Desideratum" Mixer which I had from you. I am thoroughly pleased with it.

Messrs. P. H. Bracher & Co.

Yours faithfully,
D. WILLIAM JONES.

High Street Dispensary,
East Dereham, Feb. 28th, 1885.
Dear Sirs,—In answer to yours of this morning, am glad to inform you I cannot speak too highly of your "Desideratum" Mixer. I am the inventor of a Game and Turkey food, a compound of a very complicated nature and can now mix in one hour the quantity that formerly took us two days to blend, I, myself, yesterday recommended the Mixer to a large wholesale Norwich house. Hoping you will hear from these with good results.

Messrs. P. H. Bracher & Co.

WILLIAM PARKE, Dispensing Chemist,
Proprietor of the celebrated Cough Mixture
(Balsam of Aniseed and Coltsfoot).

From HARVEY and Co., Veterinary Chemists,

6, Bachelors' Walk, Dublin, 28th Feb., 1885.
Dear Sirs,—In reply to your enquiry we are glad to be able to say that the "Desideratum" Mixer we had from you last year is giving us much satisfaction. We use it for Harvey's Aconite Powders; and although some of the ingredients are in minute quantities, we find that we can safely and effectually blend them with your Mixer in much larger bulks than hitherto, a result of great value to us.

Messrs. P. H. Bracher & Co.

124, High Street, Wandsworth, 2/3/85.
Dear Sirs,—I have much pleasure in handing you testimonial for Patent "Desideratum" Mixer. It does its work both rapidly and well, and I have found it eminently satisfactory in mixing all kinds of Powders. Authorizing you to make what use you like of this.

Messrs. P. H. Bracher & Co.

I am, yours respectfully,
J. GIBBS.

Canal Head, High Street, Peckham,
London, Mar. 2, 1885.
Dear Sirs,—I have much pleasure in testifying to the efficiency of your "Desideratum" Mixers. In the preparation of a newly invented and complicated Veterinary Medicine it is necessary that several ingredients should be *very thoroughly mixed* in as short a space of time as possible. I have used one of your larger Mixers, and it has suited my purpose admirably.

Messrs. P. H. Bracher & Co.

I am, Dear Sirs, yours faithfully,
W. J. STANDBROOK.

21, Oxford Street, Manchester, March 2nd, 1885.
Gentlemen,—In reply to yours of 27th inst., re Mixer, I have great pleasure in saying it has answered all my expectations. For mixing Gregory Powder Camphorated Chalk, Horse Powders, &c., &c., it is A. 1.

Messrs. P. H. Bracher & Co.

W. B. CAPPER, Wholesale Druggist and Drysalter,
Oil, Paint, Colour, and Varnish Merchant.

Belper, March 3rd, 1885.
Gentlemen,—The "Desideratum" perfectly satisfies us, in fact we think some of our preparations were never so well made as they have been since we have used your Mixer.

Messrs. P. H. Bracher & Co.

Yours respectfully,
J. CALVERT.

North Shields, March 3rd, 1885.
Gentlemen,—I have had one of your "Desideratum" Mixers in frequent use since I purchased it in March 1884, and have found it to answer admirably. It saves much time and trouble.

Messrs. P. H. Bracher & Co.

JAMES GIBSON.

Pulborough, Sussex, March 6th, 1885.
Gentlemen,—In reply to your query as to the usefulness of the "Desideratum" Mixer, I beg to say I am much pleased with it and find it very useful and quite up to the work you state it will do in your circulars.

Messrs. P. H. Bracher & Co.

W. T. MADDOCK,
Pharmaceutical & Analytical Chemist,
Maker of the Noted Old English Lavender Water.

19, Fore Street, Ipswich, March 11th, 1885.
Gentlemen,—The "Desideratum" Mixer which I had from you last November for the manufacture of Baking Powder, answers its purpose admirably. I wish I had known of the invention ten years ago, I should certainly have been a purchaser.

Messrs. P. H. Bracher & Co.

Yours faithfully,
JOSEPH TURNER.

101, Great Clowes Street, Lower Broughton, Manchester,
March 18th, 1885.
Gentlemen,—I am much pleased with the "Desideratum" Mixer I had from you. I find it saves me a lot of time. It also has the advantage of being cleanly and does its work well without any waste. I do not exaggerate when I say that it has been a "real boon" to me.

Messrs. Bracher & Co.

I remain, Gentlemen, yours sincerely,
S. PIGOTT.

68, Lower Broughton Road, Manchester, March 20th, 1885.
Gentlemen,—In answer to your enquiry concerning the "Desideratum" Mixer I had from you; I have great pleasure in stating that I am well satisfied with it and had I known the labour and time it saves, I should have purchased one long ago.

Messrs. P. H. Bracher & Co.

Yours respectfully,
R. O. HUDDLESTONE.

9, Kingston Terrace, Hessele Road, Hull, 17/4/85.
Gentlemen,—The Mixing Machine arrived this morning. I have given it a trial already, and am well pleased with it. I mixed some powders in five or ten minutes, that would have taken me half-an-hour or more in the ordinary way and with a better result.

Messrs. P. H. Bracher & Co.

Yours respectfully,
A. RICHARDSON.

BRACHER & Comp., Inventors and Patentees, Wincanton and Yeovil, Somerset.
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INSECT POWDER, for Destroying all kinds of Insects.
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CHEMICAL FLY PAPER,
FOR THE TOTAL DESTRUCTION OF
FLIES, MOTHS, MOSQUITOES, &c.

DIRECTIONS FOR USE.—Spread each Paper on a Plate,
and moisten with Cold Water two or three times a day. Keep
it out of the way of Children and Domestic Animals.

THOS. H. SMITHSON, Dispensing Chemist,
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POISON.

SODA WATER, LEMONADE, LEMON KALI, and
various other Beverages.

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CONDY'S FLUID, CARBOLIC ACID, and
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YOU CAN'T AFFORD

TO LET
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CUSTOMERS
GO TO
ANOTHER
STORE
FOR WHAT
THEY WANT
WHEN YOU CAN
SELL IT
YOURSELF
AND MAKE
MONEY
ON IT.
ASK JOBBERS
YOUR FOR IT
OR SEND FOR
PRICE LIST
AND
SAMPLE CAN
FREE.

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STRONGEST
GLUE
IN THE WORLD.

TWO GOLD MEDALS

LONDON
1883

CONTAINS NO ACID

NEW ORLEANS
1885.

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EXHIBITION
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SIXTEEN HUNDRED POUNDS TO A SQ. INCH.

MENDS EVERYTHING.

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to any address in the United Kingdom, on
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REPAIR YOUR
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&c &c
IT IS UNEQUALLED.
TRY IT.

LE PAGE'S Glue is used by Pullman Palace Car Co., Mason & Hamlin Organ and Piano Co., and by thousands of first-class manufacturers and mechanics throughout the world, for all kinds of fine work. *No Heating. Always Ready. Indispensable in every Household.* Sold in tin cans for Mechanics and Amateurs, and in bottles for Family use for repairing Furniture, Glass, China, and Bric-à-brac. The total quantity sold between January, 1880, and January, 1885, in all parts of the world amounted to over **32 Million Bottles.** For special work requiring the strongest adhesive known, Le Page's is, unequalled, as is proven its being the only glue used at the Smithsonian Institute at Washington.

RETAIL PRICES.—Family Glue, in 1-oz. bottles, 6d., 2-oz. bottles, 1s.; Gum or Mucilage, 1-oz. bottles, 6d.; Carriage Glue, in cans, half-pints, 1s. 6d., pints, 2s. 9d., quarts, 4s. 6d.
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For Sale throughout the World by Druggists, Grocers, Stationers, Oilmen, Ironmongers, and Fancy Goods Dealers.

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HAGAN'S MAGNOLIA BALM.

HAGAN'S MAGNOLIA BALM gives a Pure and Blooming Complexion, Restores and Preserves Youthful Beauty. Its effects are Gradual, Natural, and Perfect. It Removes Redness, Blotches, Pimples, Tan, Sunburn, and Freckles, and makes a Lady of Thirty appear but Twenty. The MAGNOLIA BALM makes the Skin Smooth and Pearly, and imparts a Fresh Appearance to the Countenance. Hagan's Magnolia Balm has been Established nearly 40 Years. Hagan's Magnolia Balm can be obtained of all Chemists, Perfumers, and Stores, or sent to any address on receipt of 3s. 6d.

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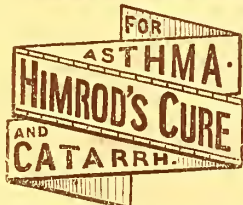
THE OLDEST, BEST, AND MOST WIDELY-KNOWN FAMILY MEDICINE IN THE WORLD.



PAIN KILLER.

EVERY FAMILY SHOULD KNOW, that PERRY DAVIS' PAIN KILLER is a very remarkable remedy both for INTERNAL and EXTERNAL use, and wonderful in its quick action to relieve distress. It is recommended by Physicians, Missionaries, Ministers, Nurses in Hospitals, Managers of Factories, Farm Stewards—in short, by everybody everywhere who has ever given it a trial. Taken internally, cures sudden Colds, Catarrh, Coughs, Bronchitis, Asthma, Croup, Dyspepsia, Liver Complaints, Acid Stomach, Head-ache, Heartburn, Indigestion, Rheumatism, Neuralgia, Sciatica, Gout, Canker in the Mouth, Throat, or Stomach; Sick Headache, Sea Sickness, Piles, Kidney Complaints, Lumbago, Spasms, Canker Rash, Cramp and Pain in the Stomach, Painters' Colic, Worms, Diarrhoea, and Cholera; applied externally, cures Scalds, Burns, Frost bites, Chilblains, Erysipelas, Ringworms, Whitlows, Boils, Old Sores, Sprains, Bruises, Toothache, Headache, Neuralgia in the Face or Head, Pains in the Side, Pains in the Back and Loins (Lumbago). It is a medicine now well known and appreciated throughout the world. Price of PAIN KILLER, 1s. 1½d., 2s. 9d., 4s. 6d. and 11s. Of Chemists everywhere. John M. Richards, 46, Holborn Viaduct, London, E.C., Wholesale Agent for Great Britain and Continent of Europe.

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MISS EMILY FAITHFUL, in "THREE VISITS TO AMERICA," thus writes respecting an interview with OLIVER WENDELL HOLMES: "As a fellow-sufferer from Asthma, we had early found a bond of sympathy in discussing a complaint which hitherto had baffled the science of the whole world, though America must have the credit of the discovery of the best palliative I know, viz., Himrod's Asthma Powder, from the fumigation of which I have invariably derived the greatest possible relief. Some years ago I gave it to Dr. Morrel Mackenzie, of London, who has found it of inestimable value to sufferers from this painful malady here. I have tried every remedy ever invented, and HIMROD'S CURE is the only one in which I have absolute confidence." It is important to observe that HIMROD'S CURE was employed under the highest medical sanction in the case of the late Earl of Beaconsfield.

Directions for Use.—ASTHMA.—Burn a half-teaspoonful upon a plate, or in the cover of the box. Draw the fumes well into the lungs through the mouth, retaining them as long as possible, and allowing them to escape through the nostrils. In severe paroxysms use the cure half-hourly.

Himrod's Cure, per Tin, 4s., or Post Free, 4s. 3d.

JOHN M. RICHARDS, 46, Holborn Viaduct, London, E.C.

"One of the certainties in medicine, and in this respect ranks with quinine."—Prof. YANDELL.

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For Diseases of the Stomach.



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"Modern Progress in Materia Medica."—N. Y. Medical Association.—E. R. SQUIRE, M.D.—Nov. 18th, 1884.

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This plant is a powerful tonic, laxative, preferably in small doses extending over some time. The bark is in largish pieces, rather flat and thin, breaking short; pale yellowish brown, with adherent brown outer bark, and dark fibrous inner layer; little odour, and nauseous taste; when the outer layer is corrugated and thickened, the bark is not so valuable. The fluid extract represents measure for weight, one minim being about equal to one grain of the powdered bark.

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Erythroxylon Coca.
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The leaves are oval lanceolate, slightly coriaceous, green, not brown, with pleasant odour resembling tea; they should possess the characteristic line running up the leaf on either side of the midrib. Cocaine, in colourless crystals, is the active alkaloid.

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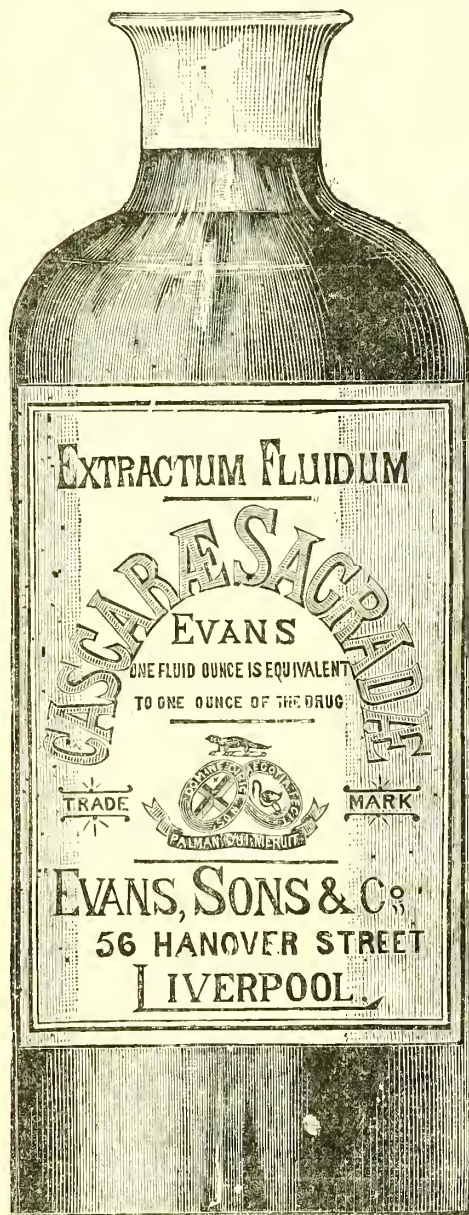
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A powerful alterative.
Dose of these compounded fluid extracts, one fluid drachm in water, thrice a day, gradually increased up to doses of 3 fluid ounces.

Strength of fluid extracts: one fluid ounce is equivalent to one ounce of the mixed drugs, or about 1-3th ounce each of the roots of Stillingia, Bamboo Brier, Burdock and Poke Root, and the bark of the Prickly Ash.



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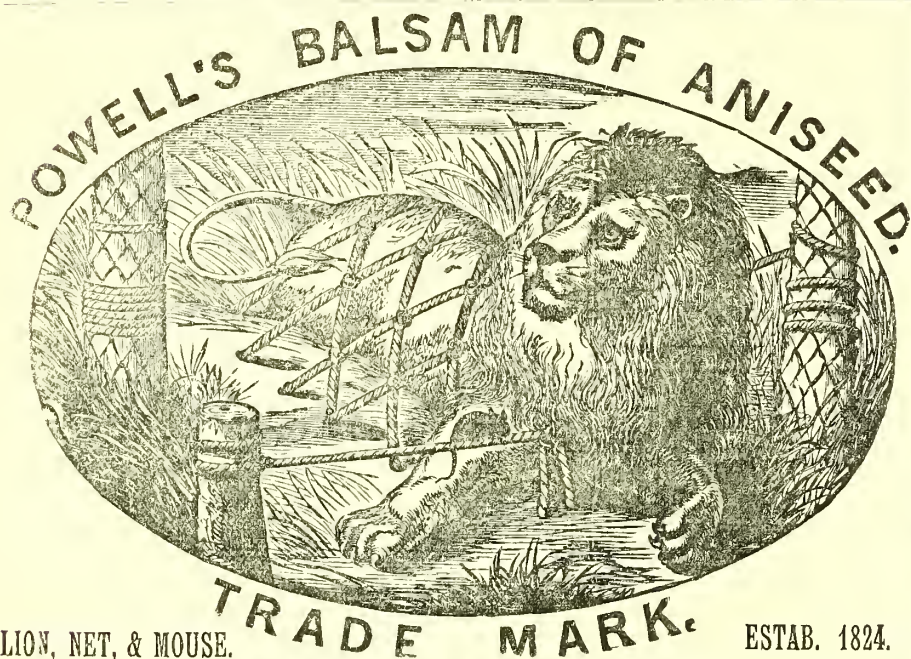
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It rapidly relieves pain from whatever cause, allays the irritation of Fever, soothes and strengthens the system under exhaustive diseases, restores the deranged functions, stimulates healthy action of the secretions of the body, gives quiet and refreshing sleep, and marvellously prolongs life. It may be taken by old and young at all hours and times, according to the Directions.

It is extensively used by Medical Men in their official and private practice, at home and abroad, who have given numerous written testimonials of its wonderful efficacy.

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'It gives me great pleasure to bear testimony in favour of FREEMAN'S Chlorodyne. I have prescribed it extensively, and in cases of Asthma, Chronic Bronchitis, the last stage of Pthisis, and the Winter Cough of the aged, I have never found any substitute or chemical combination its equal.'

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1st Stage, or Premonitory.—In this stage the remedy acts as a charm, one dose generally sufficient.

2nd Stage, or that of Vomiting or Purging.—In this stage the remedy

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'I have great pleasure in stating that I am constantly prescribing FREEMAN'S Chlorodyne. In Consumption and Asthma, as a Sedative; in Cancer, and in cases of Diarrhoea and Dysentery, I am daily witnessing its striking effects, and believe that the thanks of the profession are due to Mr. FREEMAN for his efforts to bring prominently before the profession so valuable and reliable a remedy as the Chlorodyne which bears his name.'

possesses great power, more than any other we are acquainted with, two or three doses being sufficient.

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Sold by Chemists and Patent Medicine Dealers all over the world, in bottles, 1s. 11d.; 2 oz., 2s. 9d.; 4 oz., 4s. 6d.; half-pints, 11s.; and pints, 20s. each; and by the Inventor, RICHARD FREEMAN, 70 Kennington Park Road, London, S.E.

Purchasers are cautioned not to have palmed upon them any substitute. See that the Trade Mark, "The Elephant," is on the wrapper, &c., and that the words Freeman's Original Chlorodyne are engraved on the Government Stamp, which is the only true Chlorodyne.

N.B.—Lord Chancellor Selborne, Lord Justice James, and Lord Justice Mellish decided in favour of Freeman's Original Chlorodyne, and against Brown and Davenport, compelling them to pay all costs in the suits. See Times of July 21, 1873.

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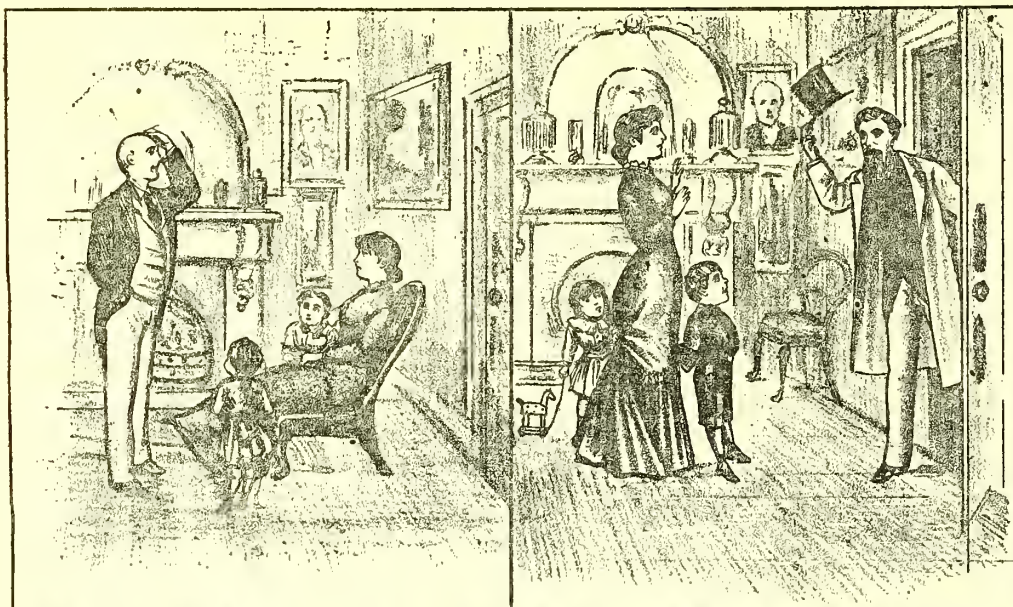
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"HOYLES' CANTHARIDINE BALM is a valuable liquid hair preparation possessing balsamic properties of a high order. It promotes a rich luxuriant growth, is delightfully refreshing and cooling, and contains no deleterious ingredients; may be applied to the most sensitive or delicate skin."

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"Dear Sir,—Your Cantharidine Balm has effected wonders on my head; from being bald I have now a fair average head of hair, and this after having used it only four or five months.
W. DWYER."

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"Mr. HOYLES, Dear Sir,—After a long illness all my hair came off, leaving my head quite bald; but after using your Cantharidine Balm nearly three months I had a splendid head of hair much thicker and stronger than it was previous to its falling off.—ANNIE PARK.
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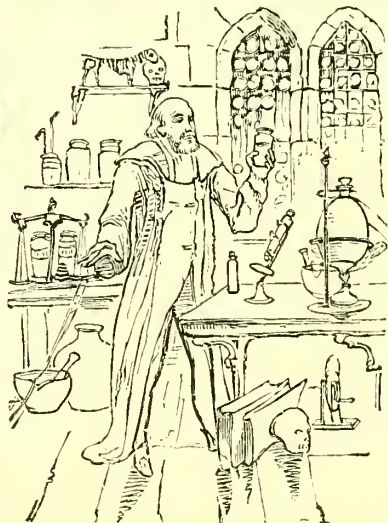
To be obtained from most Chemists in Town and Country. If any difficulty, the Proprietor, W. LOWE, Chemist, 21 ROSAMOND STREET WEST, and 180 MOSS LANE EAST, MANCHESTER, will send, post free for 14 stamps, to any address in the United Kingdom.

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25 MARKET STREET, MANCHESTER.

Dr. J. COLLIS BROWNE'S CHLORODYNE.

THE ORIGINAL AND ONLY GENUINE.

IMPORTANT CAUTIONS

From Lord Chancellor SELBORNE, Vice-Chancellor Sir W. PAGE WOOD,
and the LORDS JUSTICES OF APPEAL.

VICE-CHANCELLOR SIR W. PAGE WOOD, by whom the suit in Chancery was first heard, stated in his judgment that 'Dr. J. Collis Browne was undoubtedly the Inventor of Chlorodyne, that the whole story of the Defendant Freeman was as deliberately untrue as the falsehood he had deposed to with reference to the use of his Chlorodyne in the Hospital.'

The VICE-CHANCELLOR also stated, 'that Chlorodyne was a fanciful name, and had application been made sooner, the Court would have given Dr. Browne protection.'

LORD CHANCELLOR SELBORNE coincided with the judgment of the Vice-Chancellor upon this point, and stated 'that had application been made at a proper time and place, the Court would have found means to restrain the Defendant from misrepresenting the decision of the Vice-Chancellor.'

LORD JUSTICE JAMES, on appeal, stated in his judgment, 'that the Defendant Freeman had made a deliberate misrepresentation of the decision of Vice-Chancellor Wood.'

It was proved in Court, on affidavit by Mrs. Forbes, of Paris, that the testimonial published in the *Times*, November 14th, 1865, speaking of the great efficacy of Chlorodyne in Cholera, referred to Dr. J. Collis Browne's Chlorodyne, and that she never used any other, that she had written to the Defendant Freeman to that effect; notwithstanding which notice the Defendant publishes the said testimonial as referring to his medicine.

The Editor of the *Medical Times*, in his report on Chlorodyne, January 13th, 1866, gives information that the Chlorodyne referred to was the medicine introduced by a retired Army Medical Officer, which was Dr. J. Collis Browne; still this is published by the Defendant as testimony to his medicine.

Numerous affidavits from eminent Physicians and others were produced in Court, stating that Dr. J. Collis Browne was the inventor of Chlorodyne, and that when prescribing they mean no other.

The Defendant himself publishes that his compound is in effect and composition quite different to any other preparation; nevertheless he assumes the name, testimonials, &c., of Chlorodyne.

Technicalities in law prevent that protection which the public should justly have against such a course of conduct. It is now incumbent on all who purchase Chlorodyne to see that the name, 'Dr. J. Collis Browne's Chlorodyne,' is engraved on the Government Stamp, as it is not sold otherwise. All other compounds under the name of Chlorodyne are spurious. All attempts at analysis have failed; hence the statement that the constituents of Chlorodyne are known is a misrepresentation.

ORIGINAL AND

FURTHER IMPORTANT NOTICE.

The subjoined list of eminent Firms concur with Vice-Chancellor Sir W. Page Wood's statement in Court, that Dr. Collis Browne was undoubtedly the Inventor of Chlorodyne; and that when Chlorodyne, or the Original Chlorodyne, is ordered, they invariably supply Dr. J. Collis Browne's:—



ONLY GENUINE.

Apothecaries' Hall,	London	Frazer & Green,	Glasgow	Morson, T., & Son,	London
Allen, Hanbury & Co.,	"	Gale & Co.,	London	Newbery & Sons,	London
Bais Brothers,	"	Giles & Son,	Clifton	Oldham, G., & Co.,	Dublin
Banks & Richards,	Birmingham	Goulding, Messrs.	Cork	Parsons & Richardson,	Leicester
Barron, Harvey & Co.,	London	Gratton & Son,	Belfast	Peake, Allen & Co.,	Dublin
Bell, John, & Co.,	"	Grimwade, Ridley,	London	Raines & Co.,	Liverpool
Bourne & Taylor,	"	Grindley & Son,	Chester	Raines & Co.,	York
Corbyn & Co.,	"	Hearon, Squire & Francis,	London	Raines, Blanchards & Co.,	Edinburgh
Cox & Gould,	"	Hodgkinson, Tonge & Stead,	"	Sang & Barker,	"
Curling & Co.,	"	Hopkins & Williams,	"	Sanger, J., & Sons,	London
Curtis & Co.,	"	Hovenden, R., & Sons,	"	Sim, James, & Co.,	Aberdeen
Davy, M'Murdo & Co.,	"	Hunt & Co.,	Exeter	Smeeton, W.,	Leeds
Hobbin, W., & Co.,	Belfast	Hunt, A., & Co.,	"	Southall & Co.,	Birmingham
Drew, Barron & Co.,	London	Johnson, J. H. & S.,	Liverpool	Sutton, W., & Co.,	London
Drew, B., & Alexander,	"	Langton, W., & Co.,	London	Tomlinson, Hayward & Co.,	Lincoln
Dunn & Company,	"	Lynch & Co.,	"	Treacher, Hodgkinson & Co.,	"
Edwards, W.,	"	Mander, Weaver,	Wolverhampton	Westrup, J. B.,	Kensington
Evans, Gadd & Co.,	Exeter	Marsden & Sons,	London	Westwood & Hopkins,	Lincoln
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After these public statements in a Court of Equity, and subsequent confirmation by the trade at large, no Chemist can conscientiously use or sell any other compound for Chlorodyne without committing a breach of faith, unjust to patient and physician. The value of the remedy alone creates the great demand.

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The active principle of Hops prepared by patented process.

The pure crystallized Alkaloids, Hopeine, Morphine, Quinine, without any doubt represent the three most important medical discoveries of this century.—Hopeine is the active principle of Hops prepared from American wild Hops, which, however, contain only an exceedingly small quantity of this valuable alkaloid. To a certain degree Hopeine seems to unite the qualities of Morphine and Quinine; certainly it possesses the properties of Opiates without their objections; it produces neither headache nor sickness, and has no sinister effect on the digestive functions. Hopeine possesses antispasmodic, anodyne, sedative, and astringent properties in a remarkable degree.

W. WILLIAMSON, M.D., M.A.

Vide Am. Med. Journal, Deutsche Mediz. Zeitung, Pharmaceutische Zeitung, Mediz. Centralzeitung, Aerztliches Vereinsblatt, Lancet, etc., etc.

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HOPEINE is allowed to rank with Quinine and Morphine as one of the three greatest medical discoveries of the present century.

HOPEINE is the active narcotic principle of Hops; its preventive and curative effects in certain diseases are hitherto unexampled in the history of Medicine.

HOPEINE possesses the properties of the opiates without their objections, entailing no injurious effects on the digestive functions and on the gastric system, producing no headache or other unpleasant symptoms whatever.

HOPEINE is employed by the most eminent physicians in England and on the European and American Continent.

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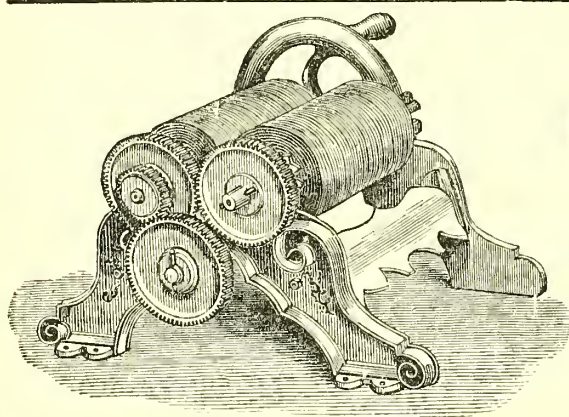
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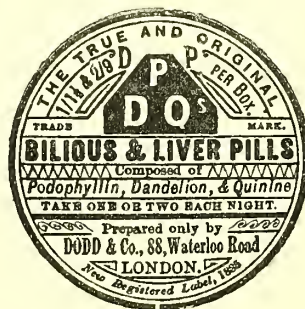
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See pages 41–44.